

Petra Maurer*

Faeces and the Old Sole of a Shoe: Remedies of the *Dreckapotheke*

<https://doi.org/10.1515/asia-2017-0050>

Abstract: In Tibetan horse medicine, the so-called *Dreckapotheke* remedies were very commonly an added ingredient in the preparation of remedies. In traditional Tibetan medicine, the medical ingredients are classified according to their origin. A category called *Dreckapotheke* however does not exist and there is no direct equivalent in the Tibetan language for this term. Nevertheless, Tibetan medicine identifies many ingredients that can be categorised as such, among these excrement, dirt and filth. Many of these that are introduced here are not used these days, and may never have been at all. The analysis of how this type of medicine is described in the Tibetan texts in this article is divided into several sections.

After a general introduction to these types of ingredients, I provide a short description of the manuscripts on Tibetan horse medicine that survey diseases and treatments. This is followed by a survey of the *Dreckapotheke* remedies as outlined in chapter twenty of the most authoritative Tibetan text on human medicine, the *Four Tantras (rGyud bzhi)* with its commentary by the regent of the Fifth Dalai Lama Sanggye Gyatso (Sangs rgyas rgya mtsho). The main part of the article describes the use of these substances as found in the texts on horse medicine. I introduce its use in the German tradition, discuss the origin of these remedies and the naming of the ingredients. This article provides the basis for further research on the *Dreckapotheke* remedies.

Keywords: Tibetan medicine, Tibetan medicine for horses, *Dreckapotheke*, traditional cures and treatments

1 The *Dreckapotheke* remedies

The term *Dreckapotheke* has been incorporated into English from a German word created by Christian Franz Paullini (1643–1712), a multifaceted scholar who studied, among other subjects, medicine, history and botany in various

*Corresponding author: Petra Maurer, Bavarian Academy of Sciences and Humanities, Munich, Germany; Ludwig-Maximilians-University Munich, Germany. E-mail: phmaurer@zos.badw.de

places such as Danzig, Königsberg, Rostock, Kiel, Copenhagen, Hamburg, and The Netherlands. After a stay in England, he received the title of doctor from Leiden, went to Sweden, Norway, Lapland and even to Iceland. In the following years, he worked in Hamburg, Holstein and France. When he was appointed the “Stifts- und Landmedicus” of the imperial Abbey Corvey in present-day North Rhine-Westphalia, he committed himself to preventing and curing diseases, to helping the poor during epidemics, to detaining fraudulent doctors, and to surveying pharmacies. From 1685 until his death, he was the town physician of Eisenach. He published about 45 works in Latin and German.¹

In 1697, Paullini published a book on treatments using filth, dirt and excrement, and it is here that he introduced the term *Dreckapotheke*. The work is titled *Neu Vermehrte / Heylsame Dreck-Apotheke, -Wie nemlich mit Kot und Urin Fast alle / ja auch die schwerste gifftigste Kranckheiten, und bezauberte Schäden vom Haupt biß zun Füßen, inn- und äusserlich glücklich curiret worden* (Newly Enlarged Beneficial Dirt Pharmacology. How with Excrement and Urine almost all, even the most Poisoning Diseases and Magical Damages from Head to Feet, Inside and Outside were Happily Cured).

This work describes many prescriptions for both the internal and external application of *Dreckapotheke* remedies, and was influential until the nineteenth century. The author collected recipes for cures that show a large variety of herbal and mineral ingredients, and a huge collection of remedies prepared with excrement, such as that from pigeons, dogs, pigs, cows, peacocks, donkeys. Furthermore, he recommends blood, frogspawn, puppy urine, crab eyes, cat brain, coral, castoreum² and so on.

The term *Dreckapotheke* denotes the use of remedies that are considered filthy, dirty or disgusting. Its basic ingredients are excrement, urine, and any kind of dirt. Although these types of remedies are probably as old as the history of pharmacology and medicine,³ his critics, suspicious about these types of remedies, doubted his knowledge and compromised his reputation. Be that as it may, in many cultures including Egyptian, Babylonian, Persian-Arabian, Graeco-Roman, Chinese and Indian, names of remedies that can be classified as *Dreckapotheke* occur in the written tradition.⁴

¹ For more details on his life, see Lux 2004: 41–44.

² Castoreum or oil of castoreum is a substance used to cure horses mentioned in the so-called *Rossarzneibücher*, books on the traditional treatment of horses written in the Middle Ages; see for example Brebaum 1967: 277.

³ Haas 1981: 19–20.

⁴ Lux 2004: 50–51, Toellner 1992: 460.

Nevertheless, reading medical texts that contain *Dreckapotheke* remedies brings up several questions: Do these texts describe real treatments? Are these treatments based on belief and experience, or are these ingredients just a misunderstanding? Is it possible that any type of “dirt”, especially excrement, was or is used as a cure, internally and externally? Are or were these remedies actually employed in Tibetan horse medicine and in human medicine? If so, where else are they described or where are their origins?

Tibetan medicine’s basic *Dreckapotheke* remedies are dirt, any type of bodily or animal urine and excrement, fat, preferably rancid, and other secretions such as human seminal fluid. Other common substances mentioned in the literature are horns, hair, flesh, brain, rotten brain and bone. Moreover, Sanggye Gyatso (Sangs rgyas rgya mtsho 1653–1705), the regent of the Fifth Dalai Lama, recommends in his *Vaidūrya sngon po*, the commentary on the primary Tibetan medical text, the *Four Tantras*, the use of other residues from daily life or substances considered dirty, such as the water used to wash the inside of shoes, old soles, or certain parts of cloth.

As contemporary medical traditions with which the reader is probably familiar have a particular focus on hygiene, it may seem strange that these substances were considered at all. However, depending on their mode of administration, some of these substances are even more widespread today as one might first think. Excrement is, of course, disgusting and smelly, but it is nothing more than a waste product of ingested food. Moreover, cow dung, for example, is estimated due to its antiseptic properties. In India, it is still spread in front of the house as it repels insects, and it is of course still used as fuel. For alchemical preparations with mercury it was considered the best, especially in its ground form called *govara*.⁵ Medicinal earth is recommended due to its healing properties; medicinal clay based on fertile loess is available in any common drugstore in Europe. Taken orally, it is recommended as a cure for the stomach and the intestines; applied externally, it supports the healing of skin problems. Siliceous earth from marine sediments is also said to strengthen skin and hair. For various purposes, geophagy was widely practised in China and furthermore, earth and preparations with earth often offer and offered a chance to survive famine.⁶

Another argument for using these substances might be found if we know the concepts of a disease’s origin. How were diseases understood to arise? Chinese inscriptions found on turtle shell and bone from the thirteenth to the eleventh century BC provide early testimony of demons or spirits of the dead as the cause

5 For the various types of cow excrement, see Hellwig 2009: 214–215.

6 Xun 2012: 383–385, especially 391–393.

for disease.⁷ In Greece and India, on the other hand, two types of diseases—in human and veterinary medicine—were distinguished: Hippocrates differentiated diseases into those caused by external influence, such as wounds (*trauma* or *elkos*), and those that originated from within the body (*nosos* or *nosema*). Indian medicine's presentation of disease origin is similar. Pālākāpya, a legendary figure but the traditionally ascribed author of the so-called *Hastyāyurveda*, the most known treatise on elephant healing, distinguished between two classes of diseases: those that came from the outside and those that came from the inside. Demons and spirits enter the body from the outside.⁸

These descriptions reflect more general trends in the development of most medical traditions: On the one hand, these traditions engaged in empirical observation: the documentation of clinical signs, their medical treatments, and descriptions of the effects of the disease. On the other hand, they were also heavily influenced by religious beliefs and practices, particularly divination and magical procedures. Traditional healers were often priests or shamans.

Tibetan medicine too follows this approach. The origin of diseases in Tibetan medicine is said to be twofold, consisting of primary and secondary causes (*rgyu rkyen*). The primary cause of a disease is said to be “the three pathogenic factors” (*nyes pa gsum*): desire, hatred and delusion. This is a Buddhist categorisation, and refers to the basic emotions that perpetuate cyclic existence. The secondary causes are said to be time, and this includes planetary constellations, demons, diet and conduct.⁹ This second category contains causes that are understood through a blend of empiricism and religious belief.

So far, the use of *Dreckapotheke* remedies seems to have developed out of a combination of observation and belief. Their use had some empirical merit and it was practical: *Dreckapotheke* remedies are widely available and require little knowledge to be used, unlike plants and the like which require special knowledge and preparation.

2 Medicine for animals

Animal medicine is about 5000 years old; the oldest text, the Egyptian papyrus of Kahun, dates back to 1850 BC and is not only the oldest veterinary text, but also the oldest extant medical text of any kind. It describes the treatment of cows, dogs, geese and fish. The oldest human medicine texts are two papyri

⁷ Harper 1998: 69.

⁸ Von den Driesch / Peters 2003: 71ff.

⁹ Maurer 2006: 560.

dated to 1550 BC. Though 5000 years might sound like an exaggeration, animal medicine is older than its oldest written source. Old Egyptian murals have scenes that show obstetrics for the cow.¹⁰

The types of animal treatments described in Tibetan, Indian, Mongolian and Chinese veterinary texts are restricted to those for animals deemed worthy of medical treatment, mainly horses, elephants and camels.¹¹ In these regions, horses were the main means of transport for humans and goods, and were used by postal services and armies.

Although more recently textbooks on cattle diseases (*phyugs nad*) have been written, all extant Tibetan veterinary texts are dedicated to horses.¹²

These Tibetan texts describe and prescribe a great variety of treatments and cures, many identical to those prescribed in human medicine. They include those with herbs, minerals and other substances, as well as the use of rituals and mantras. In particular, the therapies with ritual, mantras and the application of substances other than herbs often indicate the disease's origin as caused by demons.

To understand how these particular treatments are used, it is necessary to gain a broader perspective on three aspects of Tibetan horse treatments: the explanations in the texts, the actual practise on the ground and the interaction of the written and the oral tradition. Therefore, I carried out basic research on Tibetan manuscripts on hippology and hippiatry in western Nepal, in the districts of Mustang and Dolpo. I conducted this work as part of an interdisciplinary project on High Mountain Archaeology sponsored by the German Research Foundation in the mid-1990s. In those days, horses were still the main means of transport in the region in which I was conducting my research: the Western Himalaya in Nepal. This region has strong Tibetan cultural influence.

My main informant was the literate traditional Tibetan healer and horse doctor Tshampa Ngawang (*mtshams pa* Ngag dbang) who lived in those days in Dhumba in southern Mustang. His literacy was important as the material on horse medicine I was working with was, due to its numerous spelling mistakes and orthographical variations, more or less unreadable with a dictionary.

¹⁰ von den Driesch / Peters 2003: VII, 16–17.

¹¹ von den Driesch / Peters 2003: 55–76. For treatments in Mongolian horse, medicine, see von den Driesch 1999 and Meserve 1996. For treatments in Chinese horse medicine, see Heerde 1997: 27–31.

¹² See for example: *Phyugs nad brtag bcos gsal ston dngos thob kyi myong grub rin po che che'i do shal* by the Amdowa mDzod dge nyi ma.

3 The manuscripts

Most of the Tibetan manuscripts were photographed by the Nepal-German Manuscript Preservation Project (NGMPP) and were part of my dissertation.¹³ For the purpose of this article I refer to three texts: the manuscript of Sepo Jigme (*sras po 'Jigs med*) from Jharkot in southern Mustang, Reel No. 91/1 and the one of Tsering Tashi Lama (*Tshe ring bKra shis bla ma*) from Tarab in Dolpo, Reel No. 412/14 and of the manuscript of Lama Yeshe Gyatso (*bla ma Ye she rgya mtsho*) from Nyile in Tsum, Reel No. 2851/25.

These texts deal with two main topics: hippology and hippiatry. “Hippology” refers to the description of different horse types and their physical appearances; “hippiatry” concerns the medical treatment of horses. The books contain several shorter works; some are titled, some are not. In some cases, there are works with the same title that are not identical in content; the same text, however, can bear different titles. Coloured or black and white drawings of horses illuminate sections on the main diseases, along with their treatments. The illustrations of horses show either ailments or treatments. As none of the texts have a colophon, they are difficult to date.¹⁴

Some of the texts look worn and contain additional passages written in different handwriting than the main texts, and are almost certainly written by a different person. These addenda can concern human medicine and point to the practical use of the manuscripts: healers obviously wrote or dictated their experiences—usually on the back of the folios—in order to preserve their knowledge. The veterinarians, however, with whom I spoke denied using these manuscripts practically and claimed that they learned and taught by oral transmission. The importance of the oral knowledge transmission became obvious in a conversation with Tarchin (*mThar phyin*), the King of Mustang’s horse doctor in the 1990s. He was literate and had brought from Tibet a large text on the treatment of horses. The King himself possessed another manuscript on horse treatment. However, even this literate horse doctor had an illiterate successor.¹⁵

Some healers, however, employed the texts in practise. The illiterate healer Sönam Tsering (*bSod nams tshe ring*) from Muktinath in southern Mustang, for example, would have someone read a manuscript to him. That is how he learned to apply the pulse diagnosis on the forehead of a horse.¹⁶

¹³ For an analysis of their content, see Maurer 2001: 39–109.

¹⁴ Maurer / von den Driesch 2006: 355–356. Some diseases are already described in Pelliot *Tibétain* 1061 ff., see Blondeau 1972.

¹⁵ Maurer 2001: 28.

¹⁶ Personal communication with Angela von den Driesch.

These facts, along with the character of the texts themselves, suggest that there was an interaction between the oral and traditional literary forms. Literacy itself was obviously not a criterion to becoming trained and practising as a horse healer.

4 Medical treatments

The manuscripts on hippiatry, the Tibetan treatment of horses, explain different types of diagnoses and manifold cures. The most common methods they describe are the application of plants, minerals and other substances such as *Dreckapotheke*-remedies, bloodletting (*gtar kha*), lancing with a stone, cauterisation or burning with an iron stick or needle (*me tshugs*), and moxibustion (*me btsa*). As these treatments need minimal equipment, they are easy to perform.¹⁷ Bloodletting, for example, was a very common method to cure diseases almost anywhere, in Asia and in Europe as well. All healers considered blood disorders to be a cause of illness. Cauterisation is a common treatment in Chinese medicine and thought to stimulate the flow of energy in the meridians. In Central Asia it was performed with common materials such as wood or stone.¹⁸ Drawings with points for cauterisation and moxibustion appear in illustrations on traditional human medicine in old Tibetan sources from Dunhuang, such as the Pelliot Tibétain.¹⁹ The healer heats an iron needle in the fire and burns the body at acupuncture points (*gsang gnas*). He also applies this cure as a prophylactic: the healer and horse doctor Tshampa Ngawang burnt his horses in an attempt to prevent an infection (some kind of cold) that was spreading in the area.²⁰ Other methods of treatment include circling the affected body part with fire—for example, as a treatment of wounds—, compresses and, of course, rituals and mantras.

In the following, I present some of the *Dreckapotheke* remedies from manuscripts on hippiatry with references to traditional Tibetan human medicine. Translations or paraphrased passages from the relevant diseases follow.

¹⁷ Maurer 1997: 616–618; Maurer 2001: 249. Lancing is applied to drain pus, either with a stone or a needle. For cauterisation and lancing, see also Harper 1998: 92–96.

¹⁸ For the various forms of cauterisation, moxibustion and related external therapies in Tibetan medicine, see Pasang Yonten 2014: 75; for instruments in animal surgery in Central Eurasia, see Meserve 1996: 246. A similar cure, performed with a stone, is already described in the papyrus of Kahun; see von den Driesch / Peters 2003: 17.

¹⁹ For Dunhuang texts on horse medicine, see Blondeau 1972.

²⁰ Cauterisation is also applied to treat humans: Tshampa Ngawang treated his wife's toothache by placing a burning iron in her mouth at the site of the toothache. Observation in Jomsom in 1997.

Therefore, before going into further detail, I provide an overview of the horse manuscripts' basic structure as an introduction.

In general, each passage for a given disease begins by naming it. Then, the affected organ(s) or body part(s) are given, and any observable signs are described. The diagnosis is usually followed by the recommended treatments. Finally, each passage concludes with the wish that “this [the treatment] will help” (*de phan no*) or that “this [the treatment] is good (*dge'o*)”. This structure follows a pattern found even in the oldest extant texts on veterinary medicine.

Most of the diseases treated by *Dreckapotheke* remedies show striking clinical signs, and are difficult to diagnose, and/or have an unknown origin, examples being certain wounds, an inflammation of the intestine, poisoning or “a sudden onset disease”, the so-called Namtri-disease (*gnam khri*). For their cure, the healer often mixes medicinal plants with *Dreckapotheke* remedies. With the mixture he fumigates the horse, smears the relevant body part with an ointment or even feeds it to the horse.

5 *Dreckapotheke*-type substances in the *Four Tantras* (*rGyud bzhi*)

Tibetan medicine for humans is manifold and doctors apply a great variety of substances. Traditional doctors are formally trained in Medical-Astrological Institutes (*sman rtsis khang*), for example in Lhasa and its exile branch in Dharamsala and the Qinghai Tibetan Medical College in Xining / Amdo. One of the most authoritative sources of Tibetan medicine studied is the *Four Tantras*. As they represent the comprehensive medical knowledge of twelfth century Tibet, I have made them my reference for ingredients used in human medicine.

In the *Four Tantras*, Chapters 19 to 21 of the Exegetical or Explanatory Tantra (*bshad rgyud*) cover medication. Here, medicines are classified according to their “natural quality” (*ngo bo rdzas re'i nus pa*), a qualification related to pharmacological concepts.²¹ The substances are of various origins and are prepared in various ways. The *Four Tantras* categorise the medicine into eight groups, seven from inanimate substances, namely: gem medicine (*rin po che yi sman*), earth and stone medicine (*sa rdo'i sman*),²² wood medicine (*shing sman*), medicine as

²¹ See the Explanatory Tantra, Men-Tsee-Khang 2008: 202.

²² Stone medicine includes minerals that were like substances of gem medicine also a part of alchemical preparations, see for example Fenner 1999: 146. For a detailed study on geophagy, see Laufer 1930.

extract (*rtsi sman*),²³ medicine as decoction (*thang sman*), and herbal medicine (*sngo sman*). The eighth category is medicine prepared from living beings (*srog chags sman*). The treatise describes the various purposes for which these medicines are employed, and I summarize these briefly at the beginning of the relevant passage. For this purpose, I quote from the English translation published by the Medical-Astrological Institute in Dharamsala.²⁴

The categorisation of medical substances can support the identification of the ingredients. To demonstrate, I give a few examples below:

Among the types of medicine prepared from earth, stone and gem, the *Four Tantras* mention an ingredient called *gser gyi bye ma*, literally “golden sand”, a kind of mineral. It is said to cure, for example, kidney disorders and urine blockage. Another substance is listed under its Sanskrit name *sindhura*²⁵; it is said to cure fever of the channels, to heal wounds of the vital organs, and to drain pus and blood from abscesses. Sanskrit *sindhura*—also said to be yellow ochre²⁶—can also be translated into the Tibetan as *rgya mtsho'i dreg pa*, literally “dirt of the ocean”, according to Pasang Yonten a descriptive name. “Dirt of the ocean” is identified with the mineral limonite; *sindhura*, however, can refer to the very same, or else is in Tibetan a code for “blood”.²⁷ Medicinal substances from gems are, for example, gold and silver. Gold is said to give longevity, to have a rejuvenating effect and to act as an antidote against gem poisoning (*dbyig dug*), whereas silver is said to drain lymph fluid, pus and impure blood.²⁸ Both were, along with many other mineral substances, important ingredients in alchemy. They were to be taken at particular intervals of time.

Further substances are named according to their shape, such as the mineral—it belongs to the category of stone medicine—*smug po sbal rgyab*, “back of the brown tortoise”, which is hematite. It is said to drain lymph fluid (*chu ser*) and be good for the bones.²⁹ The mineral called *phag mgo*, literally “pig head”, is said to restore weak bones and drain lymph fluid. The name *phag mgo* points to the general problem, particularly for the identification of medicinal plants as well. As the text declares it as stone medicine, it can not be understood literally as the head of a pig here but its identification might be hampered in other literature. The translators from the Medical-Astrological Institute in Dharamsala

²³ *rtsi sman* can be prepared from any substance, such as soil, stone, plants and animals.

²⁴ See the Explanatory Tantra, Men-Tsee-Khang 2008: 199–224.

²⁵ From Sanskrit *sindhu*, river or stream, see Monier-Williams 1986: 1217.

²⁶ Parfionovitch, Dorje, Meyer 1992: 219.

²⁷ Pasang Yonten 1998: 46, 275,

²⁸ Men-Tsee-Khang 2008: 202.

²⁹ Pasang Yonten 1998: 191.

provide the following explanation: “Literally pig’s head. A fossil-type natural stone resembling a pig’s head. It has reddish yellow colour and has smooth creases all around.”³⁰

The second group in the *Four Tantras* are substances taken from flora, plants (wood) or herbs, which are used in the preparation of medicine. Wood medicine is usually prepared from the complete plant, i. e. the root, stem, trunk branch, pith, bark, resin, leaf, flower and the fruit. The root, petiole, leaf, flower and fruit serve as ingredients of medicine prepared from shrubs, bushes or any other herb. The identification of plants used in Tibetan medicine is extremely difficult and its identification often uncertain.³¹ Several plant names only designate the respective family names, and the respective plant used depends on the disease. The healer simply has to know which plant he has to collect. Other names vary from one region to the next—Tibetan healers in Tibet, Ladakh or Bhutan given the same plant name do not collect the same plants—or are names assigned by certain medical schools.³²

The next category is medicine prepared from living beings; the substances used are horn, bone, flesh, blood, bile, fat, brain, skin, nails, hair or fur, urine, faeces or even the entire body of an animal (*bubs ril lus*).³³

These categories are not unique to Tibetan medicine. A similar categorisation of medicines is for example found in the Mawangdui medical manuscript, an early text on Chinese medicine (dated earlier than 168 BC), the healing substances there being categorised in terms of plant, animal, mineral and prepared substances. To these prepared substances belong food preparations but also “cloths, mats and other manufactured goods” that can, depending on their daily use, be regarded as *Dreckapotheke* remedies.³⁴

³⁰ Men-Tsee-Khang 2008: 223. Pasang Yonten 1998: 140 “pig head fossil”.

³¹ The purpose of this article is not to clarify this problematic issue. To provide the reader with one of the possible English and/or Latin identifications, reliance is placed on the appendixes of the English translation of the first two chapters of the *Four Tantras* provided by the Medical-Astrological Institute in Dharamsala or on the *Dictionary on Materia Medica* by the Tibetan doctor Pasang Yonten Arya. Pasang Yonten trained at the Medical-Astrological Institute in Dharamsala. His glossary is also used in the paragraph on secret plant names. The names listed there are, if possible, corrected by the International Plant Name Index, see www.ipni.org/ipni/plantnamesearchpage.do. More information on the various identifications is found on the website created by Dr. Katharina Sabernig, see <https://crossasia.org/service/crossasia-lab/tibetische-medizin-termini/>

³² See for example Maurer 2001: 118–119, Czaja 2013: 100–101.

³³ *srog chags las byung rva dang rus pa dang / sha khrag mkhris tshil klad pa lpags sen spu / chu brun bubs ril lus dang bcu gsum 'byung / de dag gang la phan nus pa bstan*, see Men Tsee-Khang 2008: 217. For the commentary, see Sangs rgya rgya mtsho 1982, *stod chad*: 318.

³⁴ Harper 1998: 99. The manuscript was only discovered in the twentieth century.

Healers draw on many of these medicines mentioned in the *Four Tantras* in horse medicine as well. The use of a substance depends on its availability and the quantity needed. Herbs have always been, and are becoming, more and more precious. Horses would need a large amount of herbs; therefore, herbal medicines are generally not fed to horses although they are administered according to the written tradition. Despite the horse's outstanding value, its actual treatments were and are usually less elaborate than the texts describe them and simpler than the cures for humans.

In the following section, I present various substances of this kind that were recommended for preparing remedies.

6 Urine as medicine

Urine is probably the most common remedy from the *Dreckapotheke* and is used for many ailments. It is very easy to obtain, and is more or less available anywhere and at any time. However, regarding its manifold use, in Indian medicine and in folk medicine in Europe, for example, its assignment to *Dreckapotheke* remedies might be doubtful.

Urine, a liquid waste substance, is well-known in Āyurveda as a tonic, and in popular medicine in Europe for example, it is broadly applied to heal wounds, pimples, psoriasis, bleeding gums and so on. Moreover, in Indian alchemical texts, urine is said to heal mouth diseases and toothache, and the ears and the eyes. If the yogin inhales it, furthermore, it heals diseases of the head but also “spirit torment”.³⁵ Traditional Indian medicine recommends urine as a general cure and especially auto-urine therapy as a method to heal many diseases. In the so-called *Ḍāmaratantra* we read:

After cleaning the mouth, and performing the other essential morning functions, one should drink one's own clear urine, which is the annihilator of senility and diseases.³⁶

In Tibetan medicine, urine is a liquid with manifold uses; the *Four Tantras* recommend it as a specific remedy or in combination with herbs. Human urine cures infections and *srin* disorders—a term denoting diseases of the digestive system caused by any kind of parasites—, and also serves as a prophylactic against epidemic diseases. Cow's urine is supposed to treat lymphatic disorders

³⁵ Fenner 1999: 139.

³⁶ Gala, n.d.: 106.

(*chu ser*) and chronic fever.³⁷ Tibetan healers and doctors consider this liquid especially pure. In his *Vaidūrya sngon po*, Sanggye Gyatso favours the urine of an eight-year-old boy; he writes:

*lo brgyad lon pa'i dri chus gnyan dang / rims tshad gdon / dug rus pa zhen pa dang / dbugs mi bde ba sogs sal (r. sel)/*³⁸

The urine of an eight-year-old [child] heals plagues, contagious fever, demonic possession, poisoned bone tissue and breathlessness.

The texts on Tibetan horse medicine mention three types of urine: the urine of an eight-year-old child, one's own urine—that is the urine of the horse—and the urine of a man. The liquid fulfils various purposes.

To heal the bite of a so-called “water rat”, for example, an animal described in various veterinary texts since Aristotle, urine and several other herbal medicines are used.³⁹

Sepo Jigme's text recommends the urine of an eight-year-old boy as the carrying agent (*smān rta*), mixed with musk and calamus (*shu dag*). The healer should besmear the wound, which would often be swollen, with this ointment. The other two treatments recommended are to scratch the wound with the carcass of the water rat—this follows the homeopathic principle to cure like with like⁴⁰—and to circle it with fire, which is thought to have a purifying effect. However, in particular therapies like fumigation, the hot-pressing and the circling with fire of a wound are not only based on pure medical concepts but also influenced by ritual practises.⁴¹

The passage on the back of the folio on the bite of the “water rat” explains the preparation of another ointment for bites; this remedy is prepared with different herbs, a kind of glue prepared from boiled skin and urine. In this case, the healer should prepare the ointment with his own urine or the urine of an eight-year-old boy and then apply it to the wound.⁴²

³⁷ Men-Tsee-Khang 2008: 221.

³⁸ Sangs rgyas rgya mtsho 1982, *stod chad*: 349.

³⁹ For the Tibetan text with the German translation, see Maurer 2001: 218–219. For the English translation, see Maurer, forthcoming.

⁴⁰ Many cures recommended by Paullini also follow the principle *similia similibus curantur*; see Lux 2004: 53–54.

⁴¹ See Harper 1998: 96–97.

⁴² Maurer 2001: 219–220, [*s*]byar kyi rigs la / sngo sna tshogs dang/ chu rtsa shu dag de yi tshed (r. tshad) mams kyi/ me tog mdog 'gyur dang sprin (r. spyin) dang phye / dang/ bal sngogs (r. sogs) 'jar (r. sbyar) gyi dam pa 'di dang 'dra/ gnyan dog[s] yod na spru nag dang gu gul 'dzin pa sman chen [b]snan/ yang na rang chu 'am byi[s] pa lo brgyad pa'i chu la sbyar nas byug[s]/ nyi ma la sregs/

Urine is furthermore recommended for the treatment of birth problems especially when complications occur during natural birth. If the mare cannot give birth to the foal in a natural way, the healer should recite a mantra over a man's urine and then give it to the horse in order to start the birth process.⁴³ This treatment, which combines two methods—the use of urine and the recitation of a mantra—suggests that, the healer thought not of a medical indication but of other causes for these birth problems.

7 Brain and rotten brain

The *Four Tantras* cite the brains of goat, sheep, herbivorous wild animals, rabbit and human as a remedy. Human brain is not explicitly mentioned in texts on horse medicine available to me and brain is not a true *Dreckapotheke* remedy. Anything rotten, such as rotten brain, would however be considered as *Dreckapotheke*.⁴⁴

In the horse texts, brain and rotten brain (*klad pa rul pa*) are given, for example, as a remedy to treat a swelling of the throat and to treat brain diseases. Rotten brain is, like anything rotten, connected with a bad smell and regarded as something impure. The type of brain is not always specified. In what follows, I present a passage which explains the preparation of an ointment with several herbal medicines mixed with rotten brain. The healer applies the ointment to the swollen body part or else gives it orally to the horse (Figure 1).

If the throat of the horse is swollen, from its nose flows pus.⁴⁵ The inside of the throat is hard. As medicine, one gives *sro lo dkar po* and further remedies for the lungs, as much as are available. *dan rog*, *sman chen*, *shu dag*, *sgog skya*⁴⁶ mixed with rotten brain is rubbed on the throat up to the brim. If pus occurs, one drains [the pus]. If pus does not

43 See Maurer 2001: 199, *mi phyug[s] kru (r.phru) gu skyes ma thub na/ skyes pa'i dri chu {bar sa} byin na phan/ sngags ni / om lus shig lus shig 'byung ba bzhi'i sgo phyed shig/ brgya rtsa chu {ng} la btab nas sbyin na phan nges so/*

44 For preparations with brain in alchemy, see Hellwig 2009: 39.

45 A similar treatment is found in the manuscript of Sepo Jigme, see Maurer 2001: 224–225. The clinical signs point to laryngitis, an inflammation of the upper respiratory tract, and a swelling of the parotid gland. Laryngitis can be purulent. Medically it might be a swelling of the lymph nodes related to laryngitis. The description obviously mixes signs of various diseases.

46 According to Pasang Yonten 1998: *sro lo dkar po* is *Pegaeophyton scapiflorum* Hook. f. et. Thomson, a whitish flowering plant growing on rocks; *dan rog* is *Croton tiglium*, *sman chen* is *Aconitum richardsonianum* Lauener var., *shu dag* is *Acorus calamus* or *Acorus gramineus* soland and *sgog skya* *Allium sativum*.



Figure 1: Manuscript of Lama Yeshe Gyatso from Nyile / Tsum, swelling of the throat.

occur, one circles the throat at this part with fire. [If the swelling occurs at a body part other than the throat, one circles it with fire. ... This is good.

To treat the so-called *srad zhug* or *srad thom* disease, which the healers identified as a brain disease, brain from various animals mixed with other remedies is given orally to the horse. This treatment could be based on the idea of treating like with like. The text identifies three types of brain and proposes the brain of a bharal (*gna' ba*, here spelled *ma ba*), the brain of an antelope (*dgo ba*, here spelled *go ba*) and the brain of a kyang (*rkyang* instead of *kyang*) as the most effective remedies. If these are not available, the brain of a goat (*ra ba*) and so on will do. The author probably refers to any type of cattle and grazing animals (Figure 2).

Despite the lack of a medical indication, I would like to mention here that the texts recommend brain to prepare a drug to influence horse races. Before the race, the rider of the horse should feed certain kinds of brain orally to the horse as a drug to increase its speed and to prevent it from shying. Another ingredient of the mixture is human flesh.

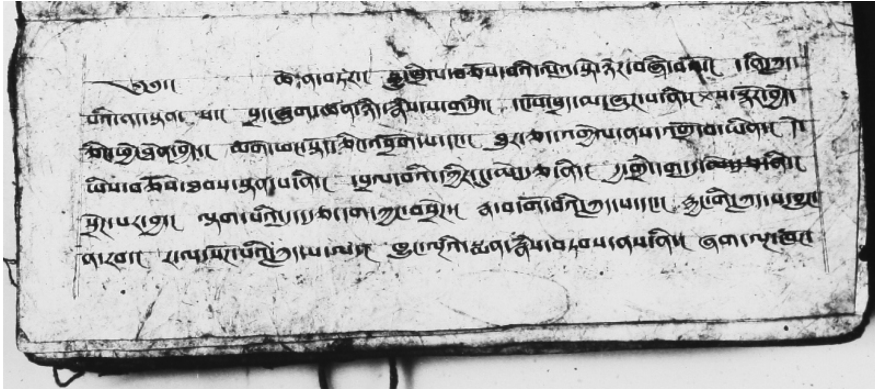


Figure 2: Manuscript of Lama Yeshe Gyatso, *srad-zhug-disease*.

In the following, I present two different recipes that include brain: The first states that one should mix the brain of a rabbit (*ri bong klad*), a fox (*va'i klad pa* or *va klad*), a vulture (*rgod kyi klad pa*) and a crow (*pho rog gi klad pa*) with human flesh (*sha chen*) and the eyes of an owl (*'ug pa'i mig*). Then one should add earth from the ground and from a horse's hoof, golden myrobalan (*a ru ra gser mdog*) and camphor (*ga bur*), and pulverise the ingredients and then stir them with goat milk.

Another mixture to enhance the horse's speed is prepared from the brain of a vulture, the brain of a musk deer (*gla ba'i klad pa*) and the brain of a fox. The carrier substance is white sugar. If the horse drinks this mixture in water, it will win the race.⁴⁷

The feeding of brain for the purpose of a horse race is certainly based on some form of magical belief.

As the following recipe might show, another influence on Tibetan medicine is found in alchemy. Alchemical texts in the Kanjur, for example, recommend the use of several body parts from someone who has been killed ritually; assigned a certain potency they are regarded as a means to above all ensure long life or even eternal life, one of the basic concepts in alchemy.⁴⁸

Brain as an ingredient to prepare a alchemical substance is also mentioned, for example, in the short alchemical text called *Amṛtarasāyana* found in the *rNying rgyud*, where it is recommended together with the root of a plant called

⁴⁷ Maurer 2001: 164–165.

⁴⁸ Tantric practitioners, such as those living in the forest or more commonly on cremation grounds, the *aghoris* used to partake of urine and excrement, see Rinehart / Steward 2000: 277.

thad bal hwa—not identified, although the first syllable *thad* also means brain—which is said to bring supernatural power. In this prescription, the brain of a murder victim is needed (*bsgral ba'i klad pa thams cad dang / thad bal hwa yi rtsa bar sbyar / mdangs kyi dngos grub des thob 'gyur*).⁴⁹

8 Flesh and organs

Other organic substances described in the *Four Tantras* are flesh and organs from humans and animals. The *Four Tantras* explicitly mention human flesh (*mi sha*), meat from snakes, vultures, peacocks and lizards (*da byid*). An organ frequently recommended to prepare a cure is the liver, namely the liver of an otter (*sram*), marmot and goat. The lungs, heart, liver, spleen and kidneys—if from an animal or human is not specified—are said to cure any type of disease of the respective organs, a variety of the “doctrine of signature” that is based on the idea that plants resembling certain body-parts are relevant for these. The stomach of a wolf, for example, is thought to improve digestion. The bile constricts the blood vessels and is of hemostatic quality. Human flesh is said to cure *gnyan nad*, wind disorders, poisoning and infections. Furthermore, the tongue of several animals serves as a remedy including the tongue of a wolf, pig, dog, donkey, and so on.⁵⁰

The hippiatric texts recommend several types of flesh and organs for a medical cure, this however not frequently. Human flesh (*sha chen*) should be mixed with several herbs and is said to cure, for example, disorders of the heart vein. Furthermore, human flesh together with other substances is supposed to increase the speed of a horse in races.⁵¹ Asked about using human flesh, the healer Tshampa Ngawang declared: “The flesh of a hero who died in a battle is the best”.⁵²

The manuscript of Sepo Jigme, for example, mentions the bile of an ox (*ba glang mkhris pa*) and the liver of a rabbit (*ri bong mchin pa*) as ingredients. The bile of an ox is ground with sal ammoniac (*rgya tsha*) and applied as a cure to

⁴⁹ See http://read.84000.co/resources/Bibliographies/Martin%2C%20Dan%20_Tibskrit%202006.pdf; *rNying rgyud*, ga: 207a4–5; the Tibetan title for *Amṛtarasāyana* is missing. Brain bone mixed with other substances is used in Chinese medicine for anti-demonic fumigation, see Strickmann 2002: 249.

⁵⁰ Men-Tsee-Khang 2008: 218–220. The Tibetan term *gnyan nad* is here translated as cancer.

⁵¹ Maurer 2001: 163, 190.

⁵² Personal communication in Dhumba/Mustang in 1996.

treat a disease of the eyes that has occurred suddenly.⁵³ The liver of a rabbit is recommended as a general cure for any kind of eye disease.⁵⁴ The medical aspect of this treatment is based on the established relation between the liver and the eyes.⁵⁵

The *Amṛtarasāyana* describes, for example, the preparation of a medicine that contains the ear of a murder victim (*bsgral ba'i rna ba dag dang sbyar*). The person who takes this mixture is said to achieve a supernatural power of hearing (*rna ba'i mngon shes thob par byed*).⁵⁶ Likewise, the intake of a medicine that contains *ālaviga* (?) pheasant, peacock, goose, cuckoo and the eyes of a murder victim provides a supernatural power of seeing (*ā la bi ga shang shang de'u / rna bya ngang pa ko ki la / 'di mams bsgral ba'i mig dang sbyar / mig gi mngon shes der thob ste*).⁵⁷

To illustrate the above-mentioned difficulty in identifying the substances referred to, especially those in alchemical texts, I quote a third example from the *rNying rgyud*: *tsi tra ka dang snying zho sha / thams cad gnod sbyin snying gi brla / bsgral ba'i tsitta dag dang sbyar / mngon shes lnga yi dngos grub thob*.⁵⁸

The medicine here is prepared from *citraka* and *snying zho sha*⁵⁹ and all [ingredients belonging to the plant remedy] called *gnod sbyin snying gi brla*. If one mixes it with *citta* of a murder victim [and eats it], one achieves the perfection of the five higher perceptions.

These treatments recommending brain, organs and flesh, especially those of animal or human origin that were killed in a certain way go beyond a pure medical concept. They point to something other than scientific or empiric influences on medicine as these substances are assigned a certain potency and power. Thus, they show the two aspects of medical treatment: the medical and the “magical” or ritual cure.

The passages present however further difficulties: The Sanskrit term *citraka* can denote various medicinal remedies but it is also a kind of snake.⁶⁰ The literal translation for the expression *gnod sbyin snying gi brla* would be “the thigh of the *gnod-sbyin*-demon’s heart”; however, it refers to a

⁵³ See Maurer 2001: 265.

⁵⁴ Maurer 2001: 227.

⁵⁵ Maurer 2001: 237, 241.

⁵⁶ *rNying rgyud*, ga: 207a2.

⁵⁷ *rNying rgyud*, ga: 207a3.

⁵⁸ *rNying rgyud*, ga: 207a4.

⁵⁹ Pasang Yonten 1998: 76, “Choerospondias B.L. Burt and A.W. Hill”.

⁶⁰ Monier- Williams 1986: 397.

herbal ingredient.⁶¹ The Tibetans simply used Sanskrit *citta*—in other contexts often heart or mind—written in Tibetan script, and its meaning here, which could denote the physical heart or brain, remains unclear as well.

The use of Sanskrit terminology in the Tibetan text and the use of terms such as “the thigh of the *gnod-sbyin*-demon’s heart” raise further questions: Did the translators not understand the meaning of a term such as *citta*? Or did the word appear as untranslatable into Tibetan as it indicated something specific from Indian cultural context? Or was the translator’s intention to hide the real meaning as the ingredient was considered secret? Is *gnod sbyin snying gi brla* a descriptive name referring to the shape of the plant? Or is it a code, a secret name? Or is it an explanatory translation of the Sanskrit term, such as in the example above where the substance *sindhura* is translated as *rgya mtsho’i dreg pa* (“the dirt of the ocean”) which is even more likely to be misunderstood today.

Be that as it may, these passages point to several difficulties the reader is confronted with when reading medical texts, especially those translated from Sanskrit into Tibetan.

9 Bones and ashes of bones

Another organic substance from animals and humans drawn on to prepare medicine is bones. Commonly, they are used in two ways, either pulverised or burnt and used as ashes.

For bones from animals, the *Four Tantras* cite fossil (*’brug rus*), which is the so-called “dragon bone”, tiger bone, pig bone, sheep bone, porcupine bone, monkey bone, bones of hoofed animals, and cowrie shell and conch as medicine for treatments.⁶²

For bones from humans, human skull and hip bone (*mi yi dur thod ... mi yi dpyi rus*), withered bones and ashes of the scapula (*mi rus btsa’ ma sog thal gyis*) are mentioned explicitly.⁶³ Just like the organs, the quality of human bones varies depending on the cause of death of the deceased person. Thus, the *Four Tantras* recommend human skulls from a burial ground (*mi yi dur thod chu ser skem*) and human bones of a person killed by thunderbolt or those of someone

⁶¹ The term is not found in Pasang Yonten 1998. The author lists the plants called *gnod sbyin rkang mar*, *gnod sbyin lce* and *gnod sbyin mig*.

⁶² Men-Tsee-Khang 2008: 218. In alchemical recipes, sea shell, oyster und cowrie shell with mercury are, for example, used to prepare a so-called *kṣārabandha*, a cure against constipation and colics in the intestines, see Hellwig 2009: 211.

⁶³ Men-Tsee-Khang 2008: 217–218.

who died due to a disease of the intestines (*thog gis bsad pa'i rus pa dang / rgyu gzer thod pas rgyud gzer 'joms*). These are used, for example, to cure wind (*rlung*) and lymphatic disorders (*chu ser*), abscesses and urinary retention. On the other hand, the advice to administer bones from people who died in a certain way, such as by a thunderbolt or in battle, seems to convey the idea that these bones in particular contain and pass on a special potency, a kind of magical influence.⁶⁴

The texts on horse medicine, however, hardly ever recommend bones or ashes of bones. According to Sepo Jigme's manuscript, ashes from the bones of a stag (*sha rus*) and fossils mixed with herbal medicine, for example, are applied externally as a cure for wounds.

These medicines are from the *Four Tantras*: tiger bone (*stag rus*) and bear gall (*dom mkhris*), fossils (*'brug rus*) and calamine (*gangs thig*) given on the wound are like stitching it. If one adds saffron (*gur gum*) from Kashmir to massicot (*mtshal dkar*), it is a good remedy for wounds as it [acts] intensively. Furthermore, according to one method [there are the following] wound remedies: Ashes from burnt deer bones, fossils, cinquefoil (*stag sha*), bear gall, musk (*gla rtsi*) and calamus (*shu dag*), bitumen (*brag zhun*) and orpiment (*ba bla*) [were applied on the wound], and anti-inflammatory medicines were given extensively. The wound is burnt with stag bone. If the intestines, such as the small intestine, are torn, there is no medical treatment.⁶⁵

When I asked the healer Tshampa Ngawang about the use of bones and ashes, he explained that he uses powdered bones to seal open wounds as this treatment protects the wound from any kind of pollution and infection. If the wound was already infected, he applies bone as a disinfectant. Additionally, the wound could be burnt with bones.

As bones contain lime, and its ashes are antiseptics, these cures might originate in Tibetan folk medicine. Bones, however, especially fossils, are also ingredients in prescriptions to increase supernatural powers. In the *Amṛtarasāyana* conch, fossils and bones from someone killed by ritual are substances to achieve long life (*dung dang 'brug rus gdung dang ni / bsgral ba'i rus pa thams cad sbyar / lus kyi rdo rje mngon shes thob*).⁶⁶

⁶⁴ Men-Tsee-Khang 2008: 218–219.

⁶⁵ See Maurer 2001: 211, *rma sman ni/ {b}rgyud bzhi gi [sman] sha [rus] dang sdom gyi khri[s]/ drug (r. 'brug) gi rus dang gang gi thigs (r. gangs thig)/ sma (r. rma) nang 'debs pas tsims (r. btsems) dang [m]tshung[s]/ kha shes (r. che) gur gum 'tshal dkar rnan (r. bsnan)/ shin du (r. tu) zab pa'i sma (r. rma) sman legs/ yang lugs 1 la/ sma (r. rma) sman ni/ sha rus srag (r. sregs) thal drug (r. 'brug) rus dang/ stag sha {s}dom [m]khris bla (r. gla) rtsi dang/ shu dag brag {b}zhun 'babs las (r. ba bla) dang/ khong du gnyan sman mang du gtong/ rma ni sha rus kyis sregs par byed/ nang rol rgyu ma chad na bcos thabs med/*

⁶⁶ rNying rgyud, ga: 207b1–2.

Bones of someone who died a natural death were probably not considered suitable because they could indicate physical weakness.

10 Hair and ashes of hair

The *Four Tantras* explicitly recommend hair or fur (*spu*) as a remedy and give two concrete examples: the fur of bharal sheep as a cure for poisoning and the pelvic hair of a goat to treat inflammation of the tissue muscles.⁶⁷ Sanggye Ggyatso in his commentary, however, mentions the hair or fur of several animals: the hair of a white goat helps, for example, against *gdon* demons (*ra dkar ... spus gdon ... la phan*). A fumigation⁶⁸ with wolf's fur is recommended to cure dropsy (*spyang kyi ... spu dugs kyis dmu chur phan zhing*). The hair of a dog (*khyi spu*) cures *srin*-diseases and the camel's fur dries pus coming from a mouth disease (*rmong spus kha nad kyi mag chu skem*). Interesting also is the recommendation to apply women's scalp hair (*bud med kyi skra*) as a substance that activates a birth "if the baby does not want to be born" (*bud med kyi spyi bo'i skras khye'u btsa' ma 'dod pa btsa' bar byed*).⁶⁹

In the texts on horse medicine, hair is used for various purposes, such as to cure nose and ear bleeding or to treat poisoning, and as a filling for the ears or a suture for operations.

Injuries or infections of the ear are at first treated with a herbal mixture that the healer pours into the ear. The ear is then plugged with dog hair and porridge.⁷⁰ In another example, singed hair is applied to cure a wound caused by the bite of a rabid dog. At first, the healer cleans the wound with musk water. Then a medicine prepared from several herbs and the singed hair of the rabid dog itself (*khyi smyon rang gi spu bsres pa*) is given orally to the horse. This remedy is also said to cure men.⁷¹ Although the treatment is reminiscent of these

⁶⁷ Men-Tsee-Khang 2008: 221.

⁶⁸ The hair of certain animals, like donkeys, horses, dogs, camels and cows, was also used for fumigation as anti-demonic therapy in Chinese medicine, see Strickmann 2002: 249.

⁶⁹ Sangs rgyas rgya mtsho 1982, *stod chad*: 347–349.

⁷⁰ Maurer 2001: 225, *rna chog mag khrag[s] 'dzag pa la / ma nu ru rta a ru [s]kyu ru ug chos 'bras bu [b]zhi chu sbyar blug/ rdabs sam 'bram (r. 'grams) la rtse chung [g]tar / dur byi[d] dan rog gser gyi me tog dang/ ru rta la phug[s] ug chos 'bras bu/ byang ba rgya tsh[v]a yung skyer shing ngar zhib rtag (r. btags) dar la [b]tsags 'bru mar sbyar la jam gros (r. 'jam dros) blug/ khyi bal zan gron (r. dron) ma pa sgags (dgag) / snag (r.mag) khrag 'dzag pas 'on pa sel/ mgabs kyi drang pa'i (r. bas) nad kun 'joms 'di ni me (r. ma) sbyong[s] de (r. ste) / na ba'i nad kun thams cad sel/ ithi*

⁷¹ For the Tibetan text with German translation, see Maurer 2001: 209.

principles it seems to be rather like a magical practise, like the above-mentioned scratching of the bite of the “water rat” with the carcass of the rat.

The manuscript of Tsering Tashi Lama differentiates an incomparably great variety of poisoning. Most of the cures recommend the application of some kind of *Dreckapotheke* remedy. His text is so far the only one I came across that recommends the use of cat hair (*byi la'i spu*) as an ingredient to treat the so-called *sbre mong dbre* poisoning. The healer should burn the cat's hair to ashes, mix the singed remains into *chang*, traditional Tibetan beer, usually prepared from barley, or water and then give the horse the liquid to drink (Figure 3).⁷²



Figure 3: Manuscript of Lama Yeshe Gyatso, treatment of several types of poisoning.

The passage of the Tibetan text above describes the treatment of certain types of poisoning that are not clearly diagnosed, such as *ra dug*, *sren ma'i dug*, *sre long dug*, *rte mo dug* and *va'i sbres dug*. In addition to other cures, several types of hair or other body coverings should be given to the horse: these are the hair of

⁷² Maurer 2001: 249–250.

the bat (*bya sbang gi spu*), the feather of a snow cock (*gong mo'i spu*), the hair of the antelope (*gna ba'i spu*, here spelled *sna ba*), dog hair (*khyi'i spu*), and bird feathers (*bya'i spu*). These ingredients should be burnt to ashes, mixed with “bad chang” (*chang ngan*) and “bad water” (*chu ngan*) and given orally to the horse.⁷³

To remove nose bleeding, for example, hair serves the healer as suture material. He fills a cotton cloth with medicine, binds it with a single hair from a horse's tail, and then fixes it to the shoulder of the diseased.⁷⁴

The healer can use hair from a horse's tail to operate on an excrescence in the eye: “If the horse [is befallen] by an eye disease⁷⁵ whereby the eye was hit by a thorn,⁷⁶ by earth or by a stone and if the eye is “clouded”,⁷⁷ red flesh appears within the eye and the pupil is covered [with something]. One pulls out [a hair] from the tail of the horse, threads it into a needle and pricks [the needle] in the flesh of the eye. After one has pricked under the flesh, something like a pea occurs within the flesh. One cuts [into the skin] with a lancet and tears it out. One throws this pea into the cesspool. As medicine for the eyes, one gives dry tobacco leaf (*sur ti*),⁷⁸ clove (*li shi*), sal ammoniac (*rgya tshva*) *sdo tho lo* (?), *spra ba* (?) and white figwort (*g.yer dkar po*). One burns above and below the eye. Liver of a hare helps for all diseases. Thus it is said.”

Although the treatment here sounds unusual, the style of the passage clearly points to a treatment that someone had actually performed. The description differs noticeably from the stereotypical ones that are usually found on the front pages of the texts. The operation to remove the foreign body points to severe conjunctivitis with an excrescence. The red flesh indicates that the excrescence is caused by a foreign body in the eye.

73 In texts on medicine the term *chu ngan* usually refers to seminal fluid.

74 See Maurer 2001: 225, *sna khrag[s] dang kha nas khrag[s] byung na/ ma ru [rtse] mgo nag dar dkar po la [b]tum[s] la rnga ma dkar po nyag mas [b]cing[s] sogs ma la rtags (r. btags)/*

75 Maurer 2001: 227, *rta la dmigs (r. mig) nad nag[s] tsher sa sdo (r. rdo) dmigs (r. mig) la phog byung na/ dmigs (r. mig) sprin byung na/ dmigs (r. mig) gi nang sha [d]mar yong[s] nas rgyas (r. rgyal) mo skabs (r. bkab) gyur na/ rta mjug spis (r. phyis) nas khab la [br]gyus dmig (r. mig) sha sde la spug (r. phug) nas ni/ sha 'di 'og tu mdzugs (r. btsugs) byas nas/ sha yi nang tu (r. du) sran de [r]ma gas tsam cig yong/ {s}de la rtsa phug (r. gtsag bu) [g]shags nas rton (r. bton) par bya/ sran de [r]ts[v]a lam nang du slug (r. blug)/ dmigs (r. mig) sman sur ti li shi rgya tsh[v]a sdo tho lo/ dbra ya (r. spra ba) {kha} [g.]yer dkar po gtong/ dmig (r. mig) gi stod [s]mad gnyis su sreg/ re (r. ri) bong phyin pa'i (r. mchin pas) nad nam kun la phan/ ithi/*

76 Translation of term *nags tsher* according to Tshampa Ngawang; it is not in the dictionaries.

77 The eye lens is tarnished; it could be a kind of cataract. See Zhang 1985: 2090, *mig sprin/ mig sgrib byed kyī nad*; Jäschke 1985: 414, s.v. *mig*: “a white spot in the eye ... the cataract is called so...”.

78 The term is not Tibetan but could be Nepali; see Turner 1980: 617.

11 Nails, horn, hooves and feathers

Some of these drug mixtures recommended feathers as ingredients. Other kinds of horn-like substances from animals that are used to prepare medicine are skin, nails, horn itself, claws and hooves. According to the *Four Tantras*, rhinoceros horn (*bse ru*) dries up infected blood and lymphatic fluid of the trunk (*bse rus byang khog mam* (r. *mag*) *khrag chu ser skem*). Deer horn has a similar effect, whereas the horn of antelopes or gazelles cures diarrhoea. Goral and ram horn is ecbolic (*bu 'byin*). Wild yak horn is said to generate heat and to dissolve tumours (*rgod g.yag rwa yis drod skyed skran nad bshig*). Very precious is argali horn, as it is said to cure and control epidemics.⁷⁹ The skin of various animals is furthermore assigned different qualities: rhinoceros and ox hide are said to cure small pox. Claws are also used; those of a crocodile cure bone fever (*rus tshad*). Donkey hooves, on the other hand, cure urinary retention.⁸⁰

To treat a certain type of lung disease, Tsering Tashi Lama's manuscript recommends several kinds of horn, such as the horn of an ox, (*glang gi ra jo*), the horn of a wild yak (*g.yag rgod kyi ra*), the horn of a stag (*sha ba'i ra*) and the horn of a bharal sheep (*gna' ba'i ra*, written as *ma ba'i ra* in the text) and the claws of a cock (*bya pho'i phyi sder*).⁸¹ A special kind of horn is the "chestnut" of the horse (*rta bon pa*). The healer should mix it with other ingredients, among these dried dog excrement, and fumigate the horse to treat a disease in the intestines.⁸²

12 Body secretions

The *Four Tantras* do not mention body secretions explicitly, that is sperm and secretions from the vagina (*chu ngan*), as medicinal substances. Sanggye Gyatso, however, describes explains *chu ngan*, the term literally means "bad water" as the liquid that occurs when male and female cohabit. Its potency heals psoriasis and wounds. (*chu ngan la spyi dang 'dir / de'ang pho mo 'khrig pa'i skabs sa bon dkar dmar min pa'i chu sna ring 'ong ba de byugs na me dbal sogs rma rigs la phan*).⁸³

⁷⁹ Men-Tsee-Khang 2008: 217.

⁸⁰ Men-Tsee-Khang 2008: 220–221.

⁸¹ See manuscript of Tsering Tashi Lama, Fol. 24v.

⁸² Maurer 2001: 195. The healer Tshampa Ngawang claimed the chestnut, a callosity on the body of a horse or other equine, to be a common remedy for medical treatment. For the treatment of the intestines, see below.

⁸³ Sangs rgyas rgya mtsho 1982, *stod chad*: 341.

In hippiatric texts these ingredients are not mentioned frequently. Tsering Tashi's manuscript introduces it as an ingredient to prepare a cure for wounds caused by the saddle. If the wound is enlarged the healer should treat it with a piece of cloth, mud or clay (here called *spin po*, but it is identical with *'jim pa*) or a piece of earth with grass—whatever is available—and moisten it with seminal fluid or vaginal secretion.⁸⁴ This substance is applied to the wound, especially on its swollen part (*'dam 'bag spin po 'am / ne sing ngam / gang rnyed chu ngan gyis bran la sgal pa 'phar ba gnon no*).⁸⁵

13 Excrement, the old sole of a shoe and other substances

The *Dreckapotheke* remedies par excellence are excrement from animals and human faeces.⁸⁶ The *Four Tantras* identify, in addition to human faeces, excrement from the following animals: vulture (*rgod*), pig, horse, rabbit, dog, wolf, snow cock (*gong mo*), bird, rat and pigeon.⁸⁷ The excrement is used to treat different diseases; however, the mode of administration is not explained. Vulture droppings, for example, are assessed as heat generating, tumour dissolving and suppurating inflamed swellings. Pig faeces cure indigestion, epidemic and, like human faeces, cholelithiasis. The latter are also regarded as an antidote to poisoning and as a treatment to reduce swelling. The faeces of a dog, a wolf and a Tibetan snow cock are assigned the same potency for reducing swelling”.⁸⁸

Sanggye Gyatso mentions an even greater variety of excrement with their potencies from various animals. In addition to those in the *Four Tantras*, he recommends, for example, monkey excrement and urine as a cure for a disease caused by demons (*spre'u ...brun chus gdon rigs sogs la phan*), while otter excrement is said to cure dropsy (*sram... brun gyis dmu chu skem*).⁸⁹ Goat excrement,

⁸⁴ Graeco-Roman medical authors assessed the use of semen as an ingredient as “shameless beyond belief”. There, semen was used to treat scorpion bites, see Rumor 2015: 80.

⁸⁵ Maurer 2001: 248–249.

⁸⁶ For an alchemical preparation with human excrement, see Hellwig 2009: 39.

⁸⁷ With droppings from pigeons and crows mixed with the bile of a particular type of female crane, coral, poison and certain other substances, a so-called *kṣepavedha* is prepared to improve erections and virility, see Hellwig 2009: 212–214.

⁸⁸ Men-Tsee-Khang 2008: 221–222.

⁸⁹ Paullini's *Dreckapotheke* recommends that one besmear swollen limbs with dog excrement to cure dropsy, see Lux 2004: 54.

for example,⁹⁰ helps against diseases caused by *gdon*-demons in general and is an antidote to mental illness (*ra ... brun gyis gdon spyi dang khyad par smyo byed 'joms*) in particular. The excrement and urine of a fox are assessed with the same potency. The excrement of an owl also helps against *gdon*-demons, though the enumeration is far from being complete.⁹¹ Furthermore, the droppings of a musk deer, for example, heal contagious brain diseases and wounds on the trunk (*gla ... de'i ril ma'i lums kyis rtsa nad spyi dang tsha ba gab pa'i gzer rims klad par babs pa dang byang khog rma la phan*).⁹²

The horse texts also recommend many remedies prepared with excrement or droppings, for example from vulture, dog, pig, wolf, musk deer and pigeon. Either fresh or dried, they are mostly applied externally, for example via fumigation of the horse or via the application of a compress. In some cases, however, excrement mixed with herbs is given orally.

The horse healers I asked about these cures appeared not to be surprised to hear about remedies such as dog excrement and the like. In fact, they claimed that excrement has been and is used in horse medicine. Doctors at the Medical-Astrological Institute, however, denied the use of excrement, especially in prescriptions of human medicine today. Otherwise the medicines and medical treatments in horse and human medicine are more or less identical. This would beg the question of whether healers for humans added these substances to their medical preparations for humans in ancient times.

In the following passage, I present several examples of medical preparations with excrement, distinguished by their mode of administration, i.e., either externally or internally.

14 External application

14.1 Ointments with excrement

To prepare an ointment to cure wounds, vulture droppings (*bya thal*) are mixed with other medicines. The manuscript of Tsering Tashi Lama describes its application as follows:

In the wound of the bite one applies golden myrobalan (*a ru ra gser mdog*), ashes from roasted turnip (*nyung ma*) and barley flour. These three [remedies] are applied to the

⁹⁰ For alchemical preparations with goat excrement, see Hellwig 2009: 243.

⁹¹ Sangs rgyas rgya mtsho 1982, *stod chad*: 346–349.

⁹² Sangs rgyas rgya mtsho 1982, *stod chad*: 345.

wound. When some days have passed, one washes the wound. Furthermore, if the horse's [coat] is wounded by [the rubbing and the pressure of] the saddle [that causes] a chronic wound that does not heal, one cuts with a coarse stone or a sharp knife into the wound. One besmears the trace [of the cut] with butter and burns it with a heated iron. In the wound one gives soot, vulture droppings, natron, rhubarb (*chu rtsa*) and bear's bile.⁹³

14.2 Fumigation with excrement

The manuscript of Lama Yeshe Gyatso recommends a fumigation to treat an inflammation in the intestines. Based on the signs described, a clear diagnosis is, however, impossible. The horse obviously suffers from colic which might indicate a torsion of the intestines. Nevertheless, the text suggests mixing dog excrement with several herbs and fumigating the horse with this mixture (Figure 4).

If the inflammation of the horse has befallen the large intestine,⁹⁴ its forehead scratches on the ground. It lies down and gets up. It rolls itself on the ground⁹⁵: a disease has befallen the large intestine. One roasts musk (*gla rtsi*), asafoetida (*shing kun*), palas tree (*ma ru rtse*)⁹⁶ and the fruits of white *thang khrom*⁹⁷ and gives it orally. One fumigates with smoke from burnt horse chestnut,⁹⁸ dried malt, sealing wax and dried dog excrement. If this does not help, one burns the large intestine crosswise. This will help.

The same manuscript (see below) describes a disease of the large intestine combined with kidney pain. To treat the horse, one rides it and prepares a medicine with salt water, calcite (*cong zhi*) and turnip leaves. One feeds a medicine prepared from french bean (*mkhal ma zho sha*), crab (*sdig srin*), ginger

⁹³ Maurer 2001: 248–249, *dmugs pa'i shul du/ a ru ra gser mdog dang nyung ma sregs pa'i thal ba dang nas phye dang/ de gsum rma'i nang du btab bo/ zhag 'ga' lon pa dang/ rma legs par bkru'o/ yang rta la sgäl pa byung ba dang/ rma snying (r. rnying) pa drag tu ma 'dod pa dang/ rdo ba rtsub mo 'am/ gri mnon po'i sha ro gcad do/ de'i shul du mar gyis byugs la lcags sregs kyi sreg go/ de'i shul du dud pa bya thal dang bul dog (r. tog) dang chu tsa dang dom khrigs (r. mkhris) dang 'di mams btab bo/*

⁹⁴ *rta'i 'gram long la babs na/ lag pas sa [']gru/ myal nyal lang byed/ 'dre log[s] byed / long la nad babs pa yin / gla rtsi / shing kun / {r}ma ru rtse / thang phrom (r. khrom) dkar po'i 'bras bu bsregs la khong du gtang / rta bon sbang skam[s] la cha khii lud skam[s] po mams bsreg pa'i dud pa sna la dugs / des ma phan na long rgya gram du bsregs / des phan no /* For the version in the textbook of Sepo Jigme, see Maurer 2001: 194–195.

⁹⁵ As the horse has pain, it rolls on the ground to activate the movements in the intestines.

⁹⁶ Parfionovitch, Dorje, Meyer 1992: 333: "*ma ru rtse* (Butea Frondosa: palas tree / bastard teak)."

⁹⁷ For the explanation to *thang khrom*, see Pasang Yonten 1998: 89.

⁹⁸ For the chestnut, see above.



Figure 4: Manuscript of Lama Yeshe Gyatso, inflammation of the large intestine.

(*sga skya*) and malva seed (*lcam 'bru*).⁹⁹ Moreover, the healer should cauterise the horse to the right and left side of the kidneys. If this treatment is not successful, one should feed the horse a medicine prepared from golden myrobalan (*a ru gser mdog*), *dkar po chig thub*¹⁰⁰ and red aconite (*bong nga dmar po*) and treat it with a crosswise burning in the region of the large intestine.

Similar signs and medical indications are described in Sepo Jigme's text in a passage on the same disease that is of the large intestine with kidney pain. The clinical signs are as follows: The horse also lies down and gets up; the pain in the stomach causes it to pull in its belly and its loins. Instead of rolling on the ground, one rides the horse, which is obviously suffering from constipation, in order to activate the intestines. One feeds it salt which has a

⁹⁹ Tibetan *mkhäl ma zho sha* is *Canavalia gladiata* (Jacq.), *sga skya* is *Kaempferia galanga* L.

¹⁰⁰ Tibetan *dkar po chig thub* indicates several medicines, among these is for example *Panax ginseng*, see Pasang Yonten 1998: 4; *bong nga dmar po* is a type of *Aconitum*.

laxative effect—a treatment against constipation employed in Western medicine as well—and a warming medicine with butter as a further laxative. For the horse's fumigation, dried dog excrement (*khyi lud skam po*) mixed with dried malt and turnip leaves are used. The text does not specify the leaves; according to Tshampa Ngawang, the leaves usually originate from turnip, a common remedy in horse medicine.¹⁰¹

In general, the medical variations can be related to the availability of a particular medicine. Here, however, the availability is most likely not the reason for the different medication as Lama Yeshe Gyatso's manuscript lacks the dog excrement, an ingredient that is easily available anywhere (Figure 5).



Figure 5: Manuscript of Lama Yeshe Gyatso, disease of the intestines with kidney pain.

¹⁰¹ See Maurer 2001: 206, *rta la long nad dang mkhal gzer bsong[s] nas na na/ nyal lang byed / skabs su bya rmyong byed / khong[s] sgyur por 'gro / sked pa nyag nyag byed na/ mi pho mo gnyis kyis [b]zhon nas chag (r. bcags)/ tshva chu dang gla rtsi [b]sres la gtong / lo ma dang sbang skam khyi lud [s]kam po mams kyī du bas bsdu[g] / des (r. de'i) rjes gro (r. drod) sman mar gyis rtsi[s] pa sbyin / phan nges so/*

Two kinds of excrement, the excrement from a musk deer and from a bird, are used to treat the following disease, which is described as a swelling of the horse's penis and testicles. The disease however, can not be diagnosed and could indicate a genital disease or even a hernia. In any case, the swelling indicates an inflammation.

The recommended treatment reveals discrepancies with common European medical knowledge in that the fumigation is followed by a warm compress. From a medical point of view, the treatment appears uncommon, as an inflammation should usually be cooled. But the healer Tshampa Ngawang confirmed the authenticity and application of this treatment as described in the text. The medicinal mixture is applied externally; the description leaves open the question whether the healer spits on the sacrum or if he splashes the liquid by another method on the body part. The text describes the treatment as follows:

If the penis and the testicles of the horse are swollen, first fumigate them with roasted goat and pig fat. Then besmear pebbles with oil, heat and wrap them in a cloth. This prepares a warm compress. Thereafter, use a lancet to scratch many holes [in the swollen body parts]. Generally, water will come out. Splash a mouthful of [the mixture prepared] from bird droppings, musk deer excrement and light *chang* onto the sacrum. Apply a compress of these boiled [ingredients]. This helps.¹⁰²

Excrement of a musk deer is also an ingredient in a remedy to treat the swelling of the horse's stomach.¹⁰³ Detailed signs of the swelling are not given and the cause of the disease is unknown. At first, the healer treats the swelling with a herbal medicine prepared from several ingredients which is fed to the horse. Thereafter, he applies a compress or a mould (*lug mgo*), a healing method still in use in the 1990s in Mustang. The mould is prepared from roasted and ground barley (*tshams pa*), the daily food in Tibetan cultural areas. For the cure with the compress and the mould (Figure 6), the excrement of musk deer (*gla ril*) is mixed with turnip leaves¹⁰⁴ and tea leaves.¹⁰⁵ Thereafter pus is squeezed out which indicates an abscess on the outside of the belly and not a stomach

102 Maurer 2001: 213–214, *rta'i pho mtshan dang 'bras bu s[k]rang[s] na/ dang por ra tshil phag {s} tshil gyi{s} [g]sur gyi{s} bdugs pa/ chu rdo la snum{s} byugs pa sres (r.sros) la lhan pas dril bas dugs dros par byed/ de nas rtsa'us (r. gtsag bus) kha mang du rtsags (r. btsags) la spyir {bas} chu 'ong/ {'}tshang ra'i stang (r. steng) du bya brun ni/ gla ril la sing po'i kha gru (r. phru) gtab rtsos (r. btsos) pa'i dugs byed do/ de phan no/*

103 For the Tibetan text and the German translation, see Maurer 2001: 223.

104 According to Tshampa Ngawang, the Tibetan *lo ma* always refers to turnip leaves.

105 Tea leaves are, in horse medicine, commonly used to prepared compresses, as the bitter substances have a stimulating effect.

disease. The actual cause of the disease here remains uncertain as several factors can cause a suppuration, hernia being one of them.



Figure 6: A mould (*lug mgo*) made from *tshams pa*, Photo taken by Angela von den Driesch.

As already mentioned, according to the medical texts for horses, poisoning (*dug*) is typically treated with excrement, often with dog excrement. Other varieties of remedies from the so-called *Dreckapotheke* are also used, such as the old sole of a shoe and the part of the trousers that covers the private parts (*dor rta*).¹⁰⁶

The most complex remedy mixtures prepared from the *Dreckapotheke* to cure poisoning are contained in the manuscript of Tsering Tashi. They are usually prepared for fumigation. The various poisonings are grouped into two general types: those originating from earth, and those originating from blood (*sa skyes khrag skyes*), a distinction reminiscent of the above-mentioned Indian and Greek one.

It was not possible to identify these various types of poisoning with the names given or the clinical signs described. Moreover, it is not even clear if the horse suffers from an actual poisoning or another disease. Generally, the signs

¹⁰⁶ In Chinese medicine, for example, women's menstrual cloths are used as a remedy, see Harper 1998: 99.

describe an uncontrolled and wild behaviour of the horse. In combination with the fumigation therapy this can point to the idea of a demonic origin. Both, dog excrement and fumigation are also used in Chinese medicine to treat demonic seizures".¹⁰⁷ In what follows, I present the treatments of four kinds of poisoning.

"Now the treatments of poisoning:¹⁰⁸ There are 1800 [kinds] of poisoning. To sum up, they consist of two [types]: originating from earth and originating from blood.

The face [of the horse] is sad. Much spittle [flows]. The facial hair stands up. If these three [signs] are combined it is the *khyi'i dbre* poisoning. If one finds [the remedies] one fumigates [the horse] with smoke [made from] wolf excrement, dried dog excrement, stuffing of shoes and barley flour roasted in butter. If this does not cause [relief], one mixes chebulic myrobalan (*a ru ra*) and sun spurge (*dur byid*) in *chang* and gives it [to the horse]. There is no doubt that this helps.

[The horse] rends its rope asunder and runs off. It throws its head up. When it gets up it shakes [its body]. If these three [signs] are combined it is the *sbre mong dbre* poisoning. One mixes dog excrement with butter and fumigates [the horse] at its nose. If this does not help, one mixes the ashes¹⁰⁹ of burnt cat hair with *chang* and gives it to the horse.

The horse stands up and lies down. Its tail swirls around, it smells [at in the region of] the large intestine. If these three signs are combined, it is the *skyes pa'i dbre* poisoning. One fumigates [the horse] with the parts of the breeches of a female which cover the private parts, dog excrement and butter at its nose. If this does not cause [any relief], one mixes the combed out hair of a woman with

¹⁰⁷ See Harper 1998: 103–114.

¹⁰⁸ Maurer 2001: 248–249, *da ni dug gi bcos lugs la/ dug la stong dang rtso bgyad yod/ [b]sdu na (gnyis su) 'dus/ sa skyes khrag skyes gnyis/ ngo nag kha chu mang/ ngo spu gzings (r. zing) pa dang gsum du 'dzoms na/ khyi'i dbre dug yin pas myed na spyang khu'i grun (r. brun) dang/ khyi lud skam po dang/ lham gyi 'bob tshangs dang/ phye mar rnams kyi gsur dud sdug (r. bdug) go/ de la skyed ma byung na/ a ru ra dang dur byid dang gnyis chang la btat la byin no/ des bde ba la the tsom med do/ thag pa gcad nas rgyug mgo bo bdebs (r. 'debs)/ langs kyin srug pa dang gsum du 'dzom na/ sbre mong dbre dug yin pas/ khyi'i grun dang mar dang gnyis sres la snar sdug (r. bdug) go/ de mi [b]de na byi la'i spu sregs pa'i 'job phe chang ngam chu la btat la byin no/ yang langs yang nyal rnga ma 'tshub/ long la snum (r. snom) pa dang gsum du 'dzom na/ skyes pa'i dbre dug yin pas/ bud med kyi rdor (r. dor) rta dang khyi lud dang mar gsum gyi sdud pa snar sdug (r. bdug go/ de la skyed ma byung na/ bud med kyi pra (r. skra) shad dang a ru ra gnyis chang la sbyar la (byin no)/ des ma bde na byi khung gi sas dug (r. bdug go/ yam chu (r. ya mchu) spor spor (r. 'phar 'phar?) byed pa dang/ mig gyang du lta ba dang yang nyal yang langs byed pa dang gsum du 'dzom na/ bud med kyi dbre (v.l. dpre) dug yin pas/ khyi'i grun (r. brun) dang skyes pa'i dor rta dang mar gsum gyi dud pas sdug go (r. bdug go)/ de la ma bde na a ru ra dang skyes pa'i skra sregs pa'i thal ba chang ngam chu la sbyar la byin no/*

¹⁰⁹ Tshampa Ngawang explains the Tibetan term 'job phe as a synonym of *thal ba*.

chebulic myrobalan (*a ru ra*) and *chang* and gives it [to the horse]. If this does not help, one fumigates it with earth from a mouse hole.

The lower lip of the horse vibrates [the horse] looks at the wall. It lies down and stands up. If these three [signs] are combined, it is the *bud med kyi dbre* poisoning. Therefore, one fumigates [the horse] with dog excrement, the parts of the breeches of a male that cover the privy part and butter. If this does not help, one mixes chebulic myrobalan and ashes from the burnt hair of a male person with *chang* or water and gives it to the horse.”

15 Internal application

Similar clinical signs to poisoning and similar treatments are characteristic in the “sudden onset disease” (*gnam khris*), explained in Sepo Jigme’s manuscript.¹¹⁰ The actual disease could also not be diagnosed with the signs, which are that the horse looks and neighs at the sky and gallops around (*skad gnam du ’tsher mig gnam du lta sbangs kyang sbangs su ’chor ba*). The disease is treated internally and externally with *Dreckapotheke* remedies. The horse is fumigated with smoke from sealing wax, the old sole of a shoe and camphor (*gu gul*). Furthermore, the healer should make the horse drink the liquid that has been used to wash the inside of shoes (*lham gyi nang shun bkrus pa’i khu ba*). The additional treatment is a rite that points to the idea of a demonic disease: one blows up the belly of an animal, draws eyes on it and pretends to shoot at it.

For the treatment of diarrhoea of the small and the large intestines and general diseases of the five hollow organs, a remedy mixture with various substances, among these pig excrement, is recommended to be given orally to the horse.¹¹¹ The same manuscript describes a mixture called “the ten calming ones” (*zhi byed bcu*) that should be given orally. It is prepared with several herbs and vulture droppings. Its benefits range from curing a variety of diseases that can befall the stomach to treating gynaecological diseases.¹¹²

The internal application of a substance prepared with excrement is also found in the *Amṛtarasāyana*. The speciality here is that the excrement is taken from

¹¹⁰ Maurer 2001: 216–217.

¹¹¹ Maurer 2001: 206–207, *rgyu long* [’]khru sman la/ {*rgyu long khru sman*}/ *nad nmams spyi la phan pa’i sman/ thog{s} mar anḍa* (r. *indra*) *bzhi thang sten* (r. *rten*) / *de steng gi hang {b}cu gang gur gum bdud rtsi [sro] lo / brag zhun tsh[v]a la dang phag brun gla rtsi gu gul gser me tog{s} / [pi] pi ling rgyam tsh[v]a brnan* (r. *bsnan*) *pa’i bcu gcig ge* (r. *go*) / *rgyu long la sogs snod spyi’i gnyan tshad sel / tshal* (r. *tshad*) *rgyu{r} [’]khru ba gcod pa’i nyams byong* (r. *myong*) *zab ithi/*

¹¹² See Maurer 2001: 215–216.

someone who is still alive and from someone killed ritually and mixed with custard seed. It is recommended to treat poisoning (*lus la 'byung ba'i dri chen dang / bsgral ba'i dri chen yungs kar gsum / cha mnyam 'thungs na dug mams thub*).¹¹³

16 The old sole of a shoe and other substances

Although ingredients such as used cloth, old shoes and sole of a shoe do not occur in Chapters 19 to 21 in the *Four Tantras*, Sanggye Gyatso lists the materials as remedies. Thus, the old leather sole of a shoe mixed with the burnt hair of a human's neck acts as a remedy for poisoning from hair (*lham gyi ko mnying pa dang ltag spu ... mi'i ltag spu'i gzhob kyis spu dug sel*). A treatment with the inner sole of a shoe helps to open furuncles in the mouth (*lham mthil ... des kha shu brdol bar phan*). Striking are the underpants of a widow (*yugs sa'i dor rta*)—anything related to a widow usually symbolises something negative¹¹⁴—which are given as a remedy for a stroke thought to be of demonic origin, and in particular to be caused by the demon Rāhu.¹¹⁵

The horse texts mention substances such as old or used cloth, a piece of fabric taken from certain parts of pants, the old sole of a shoe, and water that has been used to wash the inside of shoes to prepare remedies. Commonly, these substances are remedies for poisoning. Depending on the type of poisoning, the piece of fabric from the pant should be taken from a woman's or from a man's pant. The fabric is mixed with excrement and butter and then used to fumigate the horse. Another speciality is the stuffing of shoes, called *lham gyi 'bob tshangs*, which are used for fumigation together with various kinds of excrement to cure a horse suffering from poisoning.¹¹⁶

17 Earth and soot

Besides the old sole of a shoe, the liquid that washed the inside of shoes, earth, and soot belong to the category of *Dreckapotheke* remedies. The soil medicine listed in the *Four Tantras* is quite specific and the simplest mentioned is golden

¹¹³ *rNying rgyud*, ga: 207a1.

¹¹⁴ In other contexts, for example geomancy, widow like shapes of mountains are unsuitable for construction; see Maurer 2009: 171.

¹¹⁵ Sangs rgyas rgya mtsho 1982, *stod chad*: 345; Maurer 2001: 217–218 and Maurer: Mantras and Rituals in Tibetan Medicine: Some Unconventional Cures for Horses, forthcoming.

¹¹⁶ Maurer 2001: 249–251.

sand used to treat kidney disorders and urine blockage (*gser gyi bye mas mkhal nad chu 'gags sel*).¹¹⁷

The soil remedies in the veterinary texts are even simpler; they are basically soil, mud, and soot, sometimes more specifically identified as mud from a hoof or earth from a fireplace. The remedy for the inflammation of a swollen back—which might be caused by a saddle—is an ointment prepared from salty water, brown earth mixed with herbs.¹¹⁸ In particular, the “mud from the hoof of any animal” (*dud 'gro gang rung gi smig rjes kyi 'dam pa*) is recommended as an ointment to treat, as above, the wound caused by a saddle (*sgal sman sbyar*).¹¹⁹ Mixed with *kha g.yer*—not identified—and *ba tshva*,¹²⁰ it is applied to the wound.

According to the following folio (Figure 7), poisoning is treated with various excrements as well, such as wolf excrement (*spyang khu'i brun*), dog excrement (*khyi lud*), and *bya la ya*—a drug that is not identified—mixed with flour and applied as a poultice. For this cure, the healer should treat the horse with earth from a fireplace (*sa tshig*) and seminal fluid (*chu ngan*). According to Tshampa Ngawang,¹²¹ the latter is the carrier substance for an ointment.

18 Fat and leftover-food

Finally, I would like to mention the use of some types of food and food leftovers in remedies. A common foodstuff in the high mountain areas is fat, and the *Four Tantras* regard it as a remedy. Pig fat, for example, is said to heal poisoning, eczema, and pimples; human fat pacifies disorders of wind (*rlung*) and helps against eczema and pimples as well.¹²²

If a horse is lame and drags its right leg behind it, it suffers from an inflammation of the kidney vein. If cauterisation and other procedures were ineffective, the horse is treated with an ointment prepared from *mi zhun*, a mixture of melted mark and fat.¹²³

¹¹⁷ Men-Tsee-Khang 2008: 204.

¹¹⁸ Maurer 2001: 226–227, *rta'i gzhung 'grams / rgyab gzhung gzhong pa gzhin (r. bzhin) bsrangs (r. skrang) byung na/ tsha chu dang sa kham{s} pa{s}/ churtsa/ chu thag (r. shu dag)/ dug mo mams kyi byug pa byed/*

¹¹⁹ Maurer 2001: 74.

¹²⁰ Pasang Yonten 1998: 146, describes *ba tshva* as a type of humus found on ruined cliffs of waterfalls (humus nitrosum). Due to the multiple spelling variations and mistakes in these texts it could also be *lba tshva*, i. e. anti-goitre salt.

¹²¹ Personal communication in Dhumba/Mustang in 1996.

¹²² Men-Tsee-Khang 2008: 217, 220.

¹²³ Maurer 2001: 242–243.



Figure 7: Manuscript of Lama Yeshe Gyatso, poisoning called *khyi dug*.

In the horse texts, fat from various animals is a common remedy. As already described above, goat and pig fat are used for fumigation to treat the swollen penis and testicles. Lama Yeshe Gyatso's manuscript mentions several kinds of fat, such as dog fat (*khyi tshil*), wolf fat (*spyang tshil*) and the fat of a weasel (*dre mong gi tshil*) to treat the *khyi hris* disease. The fat of a bear (*dom gyi tshi lu*) is applied to treat the swelling of a cow's neck (see below) (Figure 8).

Old butter (*mar rnying*) was a common foodstuff and widely used in Tibet. To prepare an ointment, it is mixed with several herbs and oil. This preparation is applied to the horse's coat to treat a disease called *mgo*. The term can refer to any contagious skin disease but also scabies, ringworm or even leprosy. The latter, however, is not indicated here.¹²⁴

The leftover from the brewing of *chang* is called *sbang skam*, "dried malt". This substance, mixed together with "chestnut", sealing wax and dog excrement, is used for fumigation to treat a disease of the horse's intestines. Another

¹²⁴ Maurer 2001: 214.

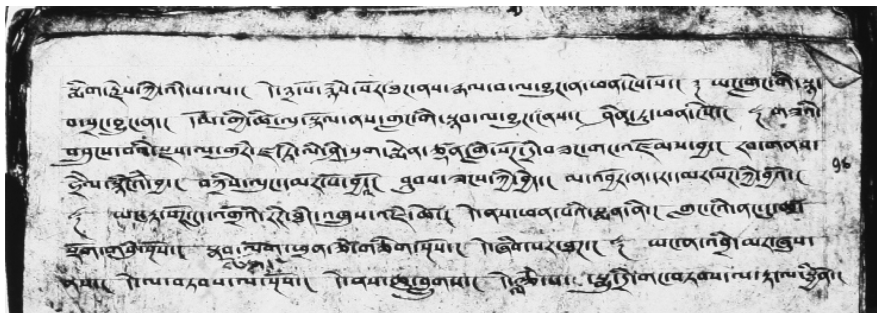


Figure 8: Manuscript of Lama Yeshe Gyatso, application of fat (*tshil*).

very common substance is tea leaves that had been used to prepare tea (*ja ro*). These leaves can be added to the horse's foodstuff but can also be used to cure, for example, the horse's kidney problems or a swelling of the belly by applying a compress made from these leaves.¹²⁵

19 *Dreckapotheke* remedies in European horse books

Returning to Europe, Christian Franz Paullini introduced the term *Dreckapotheke* in the seventeenth century. This was about the same time the manuscripts on Tibetan horse medicine in Nepal were written, and the tradition of horse books in the German language, called *Rossarzneibücher*, had already passed its peak.

The *Rossarzneibücher* have quite a long history: The Calabrian Johannes Ruffus, equerry of Friedrich II (13th C.E.), and Meister Albrant (13th C.E.), the blacksmith of Friedrich II., each wrote a textbook. Ruffus composed “De medicina equorum” and Albrant a treatise with 35 pieces of advice for the treatment of horses. Thus, they started this tradition in the thirteenth century and thereafter, these horse books slowly spread all over Europe. This happened at a time when two medicinal systems developed: the Christian monastic medicine founded by the Benedictine monks and the Arabian medical tradition, which was rather scientific.¹²⁶

¹²⁵ Maurer 2001: 197, 223.

¹²⁶ von den Driesch / Peters 2003: 85.

Three to four centuries later, there were two types of *Rossarzneibücher* available: handwritten collections and printed manuscript collections, each with hippological and hippiatric sections. Despite the physical distance, these *Rossarzneibücher* bear a striking similarity to the Tibetan manuscripts on horse medicine.

Striking is the similarity of diseases, clinical signs and treatment in the German and Tibetan manuscripts, their contents indicating a general set of diseases.¹²⁷ The passages on the various diseases with their treatments and medical prescriptions are similarly organised: they name the disease, describe its signs and detail the medical treatment, often combined with mantras and rituals. They are often illuminated, at least partly, and show, like the Tibetan books, either the disease or the treatment.

As in the Tibetan texts, the medical prescriptions in these *Rossarzneibücher* specify a great variety of substances used in the preparation of medicinal products. Besides medicinal plants, ingredients from animals such as earthworms, crabs, frogs, lice and snails, skulls and other animal parts such as blood, fat, lard and hair, and various body parts such as the intestines of a dove and eyes are used. Moreover, we read of the stomach content of a calf, and fat from a dog, a badger, a fox or a quail. The books contain an abundant quantity of *Dreckapotheke* remedies, like urine from a cow, a horse, and a child; excrement, like that from men, a cow, a horse, a hen, a dog, and a pigeon or a dove; earth, dirt from a cistern, soot, the coating from a pan that has been heated over a fire, verdigris and so on.

Two sources in particular provide an idea of the overall content and the substances used in the *Rossarzneibücher*. One is the manuscript of Johann Martin Weitzen von Oschitz from Meißen (1677) which contains an extensive collection of recipes. This book is kept at the Institute of Palaeoanatomy and History of Veterinary Medicine of the Ludwig-Maximilian University in Munich. The manuscript in 32 chapters contains, besides its main section, the treatment of horse diseases, sections on hippology with chapters on the colour of the horse hair, the determination of a horse's age by its teeth, and a description of the ears, forehead, eyes and shape of the head. Following are some selected passages from von Oschitz's book:

Against tumours. Take cow dung, vinegar with salt, stir it and pour [the substance] over [the tumour]. If one fears, however, that something is [in the tumour], one takes pitch, melts it, smears it on a cloth and binds it over [the tumour]. Then the "unpleasure" will contract within two or three days, then break it open or burn it. Before putting the pitch on

127 Brebaum 1967: 13ff.; Maurer 2001: 22.

it, cut the hair off. If you cannot cut the hair off, put the hair back on the tumour, take honey, milk and flower, heat it up so that the pitch reaches the skin again.¹²⁸

And: “If [the horse] limps and one can not see the damage, stir excrement and bacon in a pan, [put it on a cloth] and wrap [the limbs]”.¹²⁹

In another prescription to treat equine laminitis, the healer needs a whole hen, which should be black in colour:

Take a black hen, cut its abdomen and while it is still alive, take its stomach, the substance inside and the yellow skin out. Chop it into small pieces with half a measure of wine vinegar, thereafter the measure is big, mix eight lot of crunched pimpinella under the chopped stomach, give it [as long as it is still] warm to the horse, cover it and leave it standing.¹³⁰

Another example is dove dung: when mixed with vinegar, it is recommended for the treatment of ganglion, and the dung of a hen or “säutreck”, i. e., pig dung, for the cure of equine laminitis.¹³¹

The prescriptions in the *Rossarzneibuch* quite often recommend a specific timing for the medication. Further similarities with the Tibetan horse texts are treatments by rituals and cures that involve ritual practises.

Another source that might allow some reflections on the transmission of the knowledge is a text called “Die Pferdeheilkunde des Abdullah Khan, Emir am Hofe des Großmoghuls Shah Jehan” (“The Horse Medicine of Abdullah Khan, Emir at the Court of the Great Mughal Shah Jehan”). Like the Tibetan manuscripts, this treatise contains both a hippological and a hippiatric section. The

128 My translation from German: “Vor geschwulst. Nimb kühekot, essig mit salz, rühre es durch einandter undt schlage es über. Wenn man sich aber besorget, es sey was darinnen, so nimb pech, laß es zergehen, streiche es auf ein tuch, binde es warum über, so zeucht sich der unlust in 2 odter 3 tagen zusammen, denn schlage es auf odter brenne es, schier aber zuvor die haare wohl weg, ehe du das pech auflegest. Kan mans aber nicht abscheren, so streiche wieder die haar uf die geschwulst, denn nimb honig, milch undt weißmehl, makes warm, damit das pech wieder an die haut komet.” See Brebaum 1967: 137.

129 My translation from German: “Wenn es hincket undt man den schaden nicht siehet, Koth undt speck unter einandter in einer pfanne zerlassen undt damit einschlagen.” See Brebaum 1967: 99.

130 My translation from German: “Nimb eine schwarze henne, schneide sie an dem bauch auf, weil sie noch lebendig, nimb den magen herauß undt was drinnen ist, auch das gelbe häutlein, hacke es klein mit einer halben maas weineßig, darnach die maß groß ist, 8 loth gestossene biebermehl unter den gehackten magen gethan, dem pferde warm eingegossen, zugedeckt undt stehen lassen.” See Brebaum 1967: 185.

131 Brebaum 1967: 188, 205.

Indian tradition provides the basic medical concept which is, however, influenced by the Persian-Arabic tradition.¹³² This theoretical framework might cause doubts about the statement that the text is said to have been translated by the Emir from Sanskrit into Persian. By the end of the eighteenth century Joseph Earles had translated the work into English.¹³³ Besides known substances, this treatise recommends many unidentified ingredients; this could be due to its translation from two languages.

20 Considerations on the transmission of knowledge

The translation of the text from Sanskrit to Persian raises the question of the direction in which medical knowledge was transmitted, in particular how the knowledge of horse medicine was transmitted to Tibet.

Tibetan historical sources inform us that in the seventh century a doctor called Galenos from Tazig (written as *stag gzig*, *stag gzigs*, *ta zig*, *ta žig* or *rtag gzigs*) or Rome introduced Greek medical knowledge to Tibet. Although the name very likely refers to the famous Galenos of Pergamon (200 C.E.), the story reveals the transmission of Graeco-Arabic medical knowledge in general rather than anything about the famous person himself.¹³⁴

There is some evidence for the transmission of knowledge from the Arabic and Mesopotamian world to Tibet. The Tibetan language has loanwords of Arabic and Persian origin. As already pointed out by Yoeli-Tlalim, some of the plant names as well prove this Arabic or Persian-Tibetan relation: The medicine camphor, in Tibetan written as *ga phor*, *ka phor*, *ga phur*, *ga pur* or *ga bur*, is most likely derived from the Arabic or Persian *kāfūr*. The same provenience is valid for *gur gum* or *gur kum*: The Tibetan name for saffron derives from the Persian *kurkum* rather than from Sanskrit.¹³⁵ Furthermore, there are “remarkable similarities between an early Tibetan medical text and Ibn Sina’s *Canon of Medicine*.”¹³⁶ This points to a direct link between Tibet and Persia, an

¹³² Oloff 1981: 1, 240.

¹³³ For the discrepancies between the Persian and the English version, see Oloff 1981: 32–38. For the English translation see http://www.perso-indica.net/work/tarjuma-yi_salotar-i_asba.

¹³⁴ For further details, see Beckwith 1979: 300–302.

¹³⁵ Yoeli-Tlalim 2013: 57.

¹³⁶ Yoeli-Tlalim 2012: 356.

assumption that could probably be reconfirmed by a further study of the name “Tibet” itself, which is also likely of Arabic origin.¹³⁷

Tibet’s inseparable link between medicine and astrology and divination leads to another reflection with regard to the transmission of knowledge: For the astrological system *Ziwei Doushu nach Doushu*: (Numbers according to Ziwei and the plough), a book with this name is found in the Daoist Canon, Ho Peng Yoke assumes three lines of transmission: Iranian culture, Hindu culture and Chinese culture, with the Iranian influencing Babylonian and Hellenistic astrology.¹³⁸ Based on this concept, one might likewise assume that medical knowledge might have been transmitted similarly. Thus, Graeco-Arabic medicine could have spread to Tibet and India at about the same time; there is no need to further assume that this knowledge was only transmitted to Tibet via India. This would explain why Tibetan sources place Galenos in Iran and why some Tibetan plant names are of Persian rather than of Sanskrit origin.

Especially with regard to Tibet, the various influences are often difficult to distinguish as the whole region is a melting pot that absorbed influences from China, India and Central Asia and, as the name Galenos shows, even from the Hellenistic and Iranian region.

21 Reflections on the naming of the ingredients

Plant names, i. e. the adoption of names such as *ga bur* in Tibetan, or its transcription, for example of the Sanskrit *sindhura* in Tibetan, or its possible translation as *rgya mtsho’ dreg pa* (literally “dirt of the ocean”), lead back to reflections on the identification and use of ingredients, especially those in *Dreckapotheke* remedies.

Besides the examples given here, there are numerous ingredients bearing two or more Tibetan names, designations that even might not be identified as a substance. To demonstrate the difficulty in identifying ingredients and the possibility of misinterpretation, I present a selection of ingredients given in the glossary of Pasang Yonten Arya.¹³⁹

This list is far from being complete but reveals some of the problems associated with the identification of many medical ingredients. Furthermore, several plant names can easily be misunderstood as they denote both parts of an

¹³⁷ See Stein 1993: 27; <http://www.geonames.de/coucn.html#cnt>

¹³⁸ Ho 2003: 74–78, 81.

¹³⁹ Code names for medical ingredients are found, for example, on a Greek Magical papyrus, see Rumor 2015: 76–77.

Medicine	Code name
<i>ga bur</i> , cinnamomum camphora	<i>rtog byed</i> “reflecting”
<i>khab len</i> , magnetite	<i>'gugs byed</i> “calling”
<i>kho tho</i> , caragana tibetica Kom.	<i>mdzo mo shing</i> , “the wood of the <i>mdzo mo</i> ”
<i>gu gul</i> , commiphora mukul	<i>gza' gsod</i> “killing Rāhu”
<i>gla rtsi</i> , musk	<i>lte ba'i dri</i> “the smell of the navel”
<i>rgya skyegs</i> , red lac	<i>khyab 'jug ril ma</i> , “the pill of Viṣṇu”
<i>sga tsha</i> , arisaema flavum	<i>lce sreg</i> , “burnt tongue”
<i>dngul chu</i> , mercury	<i>'phrog byed sa bon</i> “the seed that rapes”
<i>dngul chu</i>	<i>gnam gyi bya khyung dkar po</i> “the white garḍua in the sky”
<i>lcum rtsa</i> , rheum officinale	<i>sa 'og rgyal po gser mdog</i> “the golden flower of the king under the earth”
<i>chu tshan</i> , hot springs	<i>nad sel chu</i> “the disease healing water”
<i>mchil pa</i> , sparrow	<i>nas zan</i> “barley porridge”
<i>dan khra</i> , ricinus cuminis L.	<i>dri za'i lag pa</i> “the hand of the <i>dri za</i> ”
<i>thar nu</i> , euphorbia	<i>sa'i zho chen</i> “big curd of the earth”
<i>stag ma</i> , rhododendron przewalskii Maxim	
<i>stag lo'i gri mchin</i> , “the liver of [a twelve-year-old] girl born in the tiger year killed by a knife”	
<i>stag sha</i> , oxytropis reniformis	<i>rte lce ba</i> , “tongue of a foal(?)”
<i>brag zhun</i> , bitumen	<i>khams lnga'i bcud sman</i> “the medicinal essence of the five elements”
<i>brag zhun</i> , bitumen	<i>brag gi khrag</i> “stone blood”
<i>dbyi mong</i> , clematis	<i>drod skyed byed</i> “warming”
<i>sbrang rtsi</i> , honey	<i>phra mo las 'byung ba</i> “originating from something minute”
<i>pri yang ku</i> , dracocephalum	<i>dre'u rngog pa</i> “mane of the mule”
<i>pri yang ku</i> , dracocephalum	<i>g.yu rnog</i> “turquoise tail”
<i>mu zi</i> , sulphur	<i>dri can</i> “smelly” or <i>dri ngan</i> “bad smell”
<i>mon cha ra</i> , a corn of quercus semecarpifolia Smith.	<i>'gram gcod</i> “cut cheeks”
<i>btsod</i> , rubia cordifolia	<i>mūla</i> “root”
<i>ru rta</i> , saussurea lappa	<i>mdze can</i> “having leprosy”
<i>shing kun</i> , asafoetida	<i>dri chen</i> “big smell”
<i>shing mngar</i> , licorize	<i>lce mkhris</i> , “tongue and bile
<i>shing tsha</i> , cinnamomum tamala	<i>lho shing</i> “wood of the south”
<i>a ga ru</i> , aquilaria sinensis	<i>shing nag</i> “black wood”
<i>shu dag</i> , acorus calamus	<i>dri can</i> “smelly”
<i>shug tsher</i> , juniperus formosana	<i>g.yu 'brug ze ba</i> “mane of the turquoise dragon
<i>bshang ba</i> , excrement	<i>dri chen</i> “big smell”

animal and a plant: *stag sha* literally means “tiger flesh”. However, according to Yonten Arya, it refers to the plant *oxytropis reniformis* which grows in dry and shady mountains. Tibetan *stag ma* literally means “tigress”; it refers to the plant *rhododendron przewalskii* maxim. The *Four Tantras* list *stag gi rus pa* as an ingredient which is here to be understood literally as “tiger bone”. And there is more: Yonten Arya mentions *stag lo'i gri mchin*, a term that has to be understood literally as “the liver of [a twelve-year-old] girl born in the tiger year killed by a knife”. He claims that this liver cures poisoning. These examples clearly show that herbs and substances from animals are not only difficult to distinguish, but also to identify.

What complicates the identification of herbal ingredients—in addition to the fact that Tibetan plant names are often names of the plant family if they are not a completely different plant from another family¹⁴⁰—are the numerous synonyms. The same plant, such as *pri yang ku*, can bear two code names or different plants, such as *shu dag* and *mu zi*, for example, have the same synonym and are both called *dri can*. The term *dri can*, however, literally means nothing but “smelly” and does not, like other additional names, indicate a certain plant or particular substance.¹⁴¹

22 Final remarks

Christian Franz Paullini argued that “The one who ignores excrement ignores its origin” (“Wer den Kot verachtet, verachtet seinen Ursprung”),¹⁴² an idea that reminds the reader of the application of these substances in alchemy and especially in tantrism. That they were ever used as medicine, however, was already being denied by the first century of our era. Descriptions of their use in antiquity in Graeco-roman pharmacological treatises was dismissed as an error. The use of semen, for example, was assessed as “shameless beyond belief”, and the use of other substances was considered “ridiculous”.¹⁴³

This shows that the use of *Dreckapotheke* remedies—whether for medical reasons or not—has been under discussion for about 2000 years. Healers rejected their use for medical reasons or denied it. They considered these substances as something dirty, as something that was not supposed to be administered in a

¹⁴⁰ The identification of plants in Chinese medicine is equally difficult, see Harper 1998: 100–101.

¹⁴¹ Maurer 2001: 118–119.

¹⁴² Lux 2004: 48.

¹⁴³ Rumor 2015: 79–80.

medical treatment. The Tibetan horse texts suggest to administer these substances particularly when an obvious cause for and a clear indication of the nature of illness are missing. This led to the notion of a demon as a possible perpetrator. The concept of healing is based on the idea that ingesting these disgusting substances disturbs the demon and thereby helps the patient to repulse it.

The written sources in traditional human and horse medicine in Tibet and elsewhere list these substances as medical ingredients and describe their use and mode of application. They are substances used to treat various diseases and are said to be taken orally or applied externally, either directly on the skin or fumigated. If we accept the idea that *Dreckapotheke* remedies were employed, the possibility of misinterpretations remains, particularly because of their names.

To sum up, one can say that the name of the substance can be:

a code or a secret name and denotes something else,
 hides the very substance (it could be precious),
 itself is used as repellent,
 denotes two different ingredients and cannot be identified,
 is translated and describes something that cannot be truly identified,
 is based on imprecise translation or a translation error and is a real misinterpretation or,
 the name denotes the very substance and is meant as such to refer to an ingredient.

These uses highlight a well-known fact that may nevertheless be worth repeating here:

Medicinal tradition in ancient times was based on a holistic approach to man and his environment. Traditional medical systems were not distinct as they combined several fields of knowledge such as medicine, astrology, astronomy, divination—traditional forms of diagnosis like pulse diagnosis are closely related to divination or can be regarded as a type of divination—religious belief with its ritual practises, alchemy and tantrism. To distinguish between the various influences is particularly difficult in Tibet, where we encounter Indian, Chinese, Central Asian and Graeco-Arabic and Iranian influences with their manifold traditions and beliefs. To shed more light on the application of these kinds of cures, further studies in traditional medicines are desirable.

Acknowledgements: I would like to thank Maddalena Rumor for sending me a copy of her unpublished Doctoral Thesis, Marta Hanson for references on Chinese medicine and the two anonymous reviewers of this article. Many thanks to the two anonymous reviewers of this article, to Katharina Sabernig for her comments and to Dara Lise Migliore for proofreading the English. This article is based on field-work performed from 1995–1997 as a part of my Doctoral Thesis published in 2001.

Bibliography

- Beckwith, Christopher, I. (1979): "The Introduction of Greek Medicine into Tibet in the Seventh and Eighth Centuries". *Journal of the American Oriental Society* 99.2: 297–313.
- Blondeau, Anne-Marie (1972): *Matériaux pour l'étude de l'hippologie et de l'hippiatrie tibétaines (à partir des manuscrits de Touen-houang)*. Genève: Librairie Droz (Centre de recherches d'histoire et de philologie de la IVe section de l'École pratique des Hautes Études II. Hautes Études Orientales 2).
- Brebaum, Hendrik (1967): *Das Rossarzneibuch des Johann Martin Weitzen von Oschitz (1677)*. Inaugural-Dissertation zur Erlangung der veterinärmedizinischen Doktorwürde der Tierärztlichen Fakultät der Ludwig-Maximilians-Universität München, München.
- Czaja, Olaf (2013): "Tibetan Medicinal Plants and Their Healing Potentials". In: *Nepalica-Tibetica. Festgabe for Christoph Cüppers*. Vol. Bd. 1. Edited by Franz-Karl Ehrhard and Petra Maurer. Andiaast: International Institute for Tibetan and Buddhist Studies, 89–117.
- Driesch, Angela von den (1999): „Einige Aspekte der traditionellen Tierheilkunde in der Mongolei“. *Ganzheitliche Tiermedizin* 13: 33–36.
- Driesch, Angela von den / Peters, Joris (2003): *Geschichte der Tiermedizin, 5000 Jahre Tierheilkunde*. Stuttgart/New York: Schattauer.
- Fenner, Edward T. (1999): *Rasayana Siddhi, Medicine and Alchemy in the Buddhist Tantras*. Ann Arbor, Michigan: A Bell and Howell Company.
- Gala, S. R. (n.d.): *Auto-Urine Therapy*. Ahmadabad, Bombay: Navneet Publications.
- Haas, Hans (1981): *Ursprung, Geschichte und Idee der Arzneimittellkunde*. Mannheim, Wien, Zürich: Bibliographisches Institut (Pharmakologie und Toxikologie, Bd.1).
- Harper, Donald J. (1998): *Early Chinese Medical Literature. The Mawangdui Medical Manuscripts*. London/New York: Kegan Paul International.
- Heerde, Michael (1997): „Pferdeklassiker“. *Ein altchinesisches pferdeheilkundliches Werk aus der Ming-Dynastie*. Inaugural-Dissertation zur Erlangung der tiermedizinischen Doktorwürde der Tierärztlichen Fakultät der Ludwig-Maximilians-Universität München, München.
- Hellwig, Oliver (2009): *Wörterbuch der Mittelalterlichen Indischen Alchemie*. Barkhuis: University of Groningen.
- Ho, Peng Yoke (2003): *Chinese Mathematical Astrology. Reaching out to the stars*. London/New York: Routledge Curzon.
- Laufer, Berthold (1930): *Geophagy*. Chicago: Field Museum Press (Anthropological Series Volume XVIII, No. 2).
- Lux, Anne-Christin (2004): „Die Dreckapotheke des Christian Franz Paullini (1643–1712)“. In: *Körperlichkeit und Kultur. Interdisziplinäre Medialkulturforschung*. Edited by Rainer Alsheimer and Roland Weibezahn. Bremen: Universität Bremen (Volkskunde und Historische Anthropologie 10), 41–66.
- Maurer, Petra (1997): "A First Survey of Tibetan Hippology and Hippiatry". In: *Tibetan Studies. Proceedings of the 7th Seminar of the International Association for Tibetan Studies II*. Wien: Verlag der Österreichischen Akademie der Wissenschaften, 613–618.
- Maurer, Petra H. (2001): *Handschriften zur tibetischen Hippiatrie und Hippologie*. Results of the Nepal-German Project on High Mountain Archaeology, Part V. (Beiträge zur Zentralasienforschung, Bd 8). Bonn: VGH Wissenschaftsverlag GmbH.

- Maurer, Petra (2006): „Grundzüge der tibetischen Heilkunde“. In: *Tibet. Klöster öffnen ihre Schatzkammern*. Katalog zur Ausstellung in der Villa Hügel. München: Hirmer Verlag, 557–564.
- Maurer, Petra (2009): *Die Grundlagen der tibetischen Geomantie dargestellt anhand des 32. Kapitels des Vaidūrya dkar po von sde srid Sangs rgyas rgya mtsho*. (Beiträge zur Zentralasienforschung, Bd 21). Halle: IITBS.
- Maurer, Petra (forthcoming): *Mantras and Rituals in Tibetan Medicine: Some Unconventional Cures for Horses*. In: *Animals: Cultural Identifiers in Ancient Societies? Documenta Archaeobiologiae* (Veröffentlichungen der Staatsammlung für Anthropologie und Paläoanatomie) München: Verlag M. Leidorf, Rahden/Westf.
- Maurer, Petra / von den Driesch, Angela (2006): “Tibetan ‘Horse Books’ from the High Himalayas”. In: *Horses and Humans: The Evolution of Human-Equine Relationships*. Edited by Sandra. L. Olsen et al.. Oxford: Bar International Series 1560, 355–361.
- mDzod dge Nyi ma (1987): *Phyugs nad brtag bcos gsal ston dngos thob kyi myong grub rin po che che'i do shal*. Peking: mi rigs dpe skrun khang.
- Men-Tsee-Khang (2008): *bBud rtsi snyin po yan lag brgyad pa gsang ba man ngag gi rgyud las rtsa ba'i rgyud dang bshad pa'i rgyud ces bya*. The Basic Tantras and the Explanatory Tantra from the Secret Quintessential Instructions on the Eight Branches of the Ambrosia Essence Tantra. Dharamsala: Men-Tsee-Khang Publications.
- Meserve, Ruth (1996): “The Surgical Instruments of the Animal Doctor in Central Eurasia”. In: *Proceedings of the 38th Permanent International Altaistic Conference (PIAC), Kawasaki, Japan: August 7–12, 1995*. Edited by Giovanni Stary. Wiesbaden: Otto Harrassowitz Verlag, 243–258.
- Monier-Williams, Sir Monier (1986): *A Sanskrit-English Dictionary*. New Delhi: Etymologically and Philologically Arranged with Special Reference to Cognate Indo-European Languages.
- Oloff, Sven (1981): *Die Pferdeheilkunde des Abdullah Khan, Emir am Hofe des Grossmoghuls Shah Jehan*. München: Inaugural Dissertation zur Erlangung der Doktorwürde an der Tierärztlichen Fakultät der Ludwig-Maximilians-Universität München.
- Parfionovitch, Yuri / Dorje, Gyurme / Meyer, Fernand (eds.) (1992): *Tibetan Medical Paintings. Illustrations to the Blue Beryl Treatise of Sangye Gyamtso (1653–1705)*. London: Serindia Publications.
- Pasang Yonten Arya (1998): *Dictionary of Tibetan Materia Medica*. Translated from the Tibetan and Edited by Dr. Yonten Gyatso. Delhi: Motilal Banarsidass Publishers.
- Pasang Yonten Arya (2014): “External Therapies in Tibetan Medicine: The Four Tantras, Contemporary Practice, and a Preliminary History of Surgery”. In: *Bodies in Balance: The Art of Tibetan Medicine*. Edited by Theresia Hofer. New York: Rubin Museum of Art; Seattle: University of Washington Press, 64–89.
- Rinehart, Robin / Stewart, Tony K. (2000): “The Anonymous Agama Prakasa: Preface to a Nineteenth-Century Gujarati Polemic”. In: *Tantra in Practise*. Edited by David Gordon White. Princeton/Oxford: Princeton University Press, 266–284.
- rNying rgyud, ga: *Tshangs pa la sogs pa drang srong dang / lha dang klu dang mi'i byang chub sems dpa' rnam la phyag 'tshalo lo / Amṛtarasāyana*, 203a5-207b6.
- Rumor, Maddalena (2015): *Babylonian Pharmacology in Graeco-Roman Drekapotheke. With an Edition of Uruanna III 1-143 (138)*. Unpublished Doctoral Thesis at the Free University of Berlin.

- Sangs rgyas rgya mtsho (1982): *gSo ba rig pa'i bstan bcos sman bla'i dgongs rgyan rgyud bzhi'i gsal byed bai dūr sngon po'i malli ka zhes bya ba bzhugs so*. 2 vols. Lhasa: Bod ljongs mi dmangs dpe skrun khang.
- Stein, Rolf A. (1993): *Die Kultur Tibets*. Aus dem Französischen übersetzt von Dr. Helga Uebach. Berlin: Edition Weber.
- Strickmann, Michel (2002): *Chinese Magical Medicine*. Stanford: Stanford University Press.
- Toellner, Richard (1992): *Illustrierte Geschichte der Medizin*. Deutsche Bearbeitung unter der fachlichen Leitung des Instituts für Theorie und Geschichte der Medizin an der Universität Münster, Bd. 1. Erlangen: Karl Müller Verlag.
- Turner, Ralph L. (1980): *A Comparative and Etymological Dictionary of the Nepali Language*. New Delhi, Bombay, Calcutta, Madras, Bangalore, Hyderabad: Allied Publishers Private Limited.
- Xun, Zhou (2012): "'Kitchen Knowledge', Desperate Foods, and Ritual. Healing in Everyday Survival Strategies during the Great Famine in China, 1958–1962". *Asian Medicine* 7: 383–404.
- Yoeli-Tlalim, Ronit (2012): "Re-visiting 'Galen in Tibet'". *Medical History* 56: 355–365.
- Yoeli-Tlalim, Ronit (2013): "Central Asian Mélange: Early Tibetan Medicine from Dunhuang". In: *Scribes, Texts, and Rituals in Early Tibet and Dunhuang*. Edited by Brandon Dotson, Kazushi Iwao and Tsuguhito Takeuchi. Wiesbaden: Reichert Verlag.
- Zhang, Yisun (1985): *Bod rgya tshig mdzod chen mo*. Krang dbyi sun [d.i. Zhang Yisun] gyis gtso 'gan bzhes nas rtsom sgrig byas pa. 3 vols. Pe cin: Mi rigs dpe skrun khang.
- www.ipni.org/ipni/plantnamesearchpage.do (06/30/2017)
- http://www.perso-indica.net/work/tarjuma-yi_salotar-i_asban (11/06/2017).
- <http://www.geonames.de/coucn.html#cnt> (11/24/2017)
- <https://crossasia.org/service/crossasia-lab/tibetische-medizin-termini/> (11/24/2017).
- http://read.84000.co/resources/Bibliographies/Martin%2C%20Dan%20_Tibskrit%202006.pdf (11/24/2017).